

A STUDY OF THE MARKETING CHANNELS  
FOR FRESH FINFISH IN THE TEXAS FISHING INDUSTRY

Prepared by

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**by**

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## ABSTRACT

This study is the first organized attempt to describe the distribution channels for finfish species taken from Texas coastal waters and point out problem areas related to the performance of marketing functions, services, and activities within these channels.

During the study, twenty-seven of approximately two hundred and ten wholesalers of fresh saltwater finfish in the State of Texas were investigated. These wholesalers--fifteen of which were located on the Texas Gulf coast, and the rest within the metropolitan areas of Houston, Dallas, Austin and San Antonio--were personally interviewed and questioned.

It was shown that the predominant marketing channel for fresh saltwater finfish utilized by the Texas fishing industry:

Harvesters → Coastal Wholesalers → Inland Wholesalers → Retailers → Ultimate Consumers. Seventy-eight percent of the volume of fresh finfish accounted for at the coastal wholesaler trade level was distributed to ultimate consumers through this channel. Other important marketing channels were shown to be: (1) Harvesters → Coastal Wholesalers → Ultimate Consumers, through which 14% of the finfish were distributed, and (2) Harvesters → Coastal Wholesalers → Retailers → Ultimate Consumers, through which the remaining 8% of the volume of fresh finfish accounted for at the

coastal wholesaler trade level was distributed to ultimate consumers.

With respect to the retail trade level in Texas, it was shown that restaurants play the most important role in distributing fresh saltwater finfish to ultimate consumers relative to vertically integrated retail markets, independent retailers, and institutions (schools, hospitals, etc.).

Approximately two-thirds of the finfish accounted for in this study was shown to be consumed in the coastal regions (including the Houston metropolitan area), while 15% was consumed in the San Antonio area, 12% in the Austin area, and 7% in the Dallas area. Of the total volume of saltwater finfish accounted for in the study, 15% was distributed out-of-state.

Finally, it was shown that the problem areas afflicting the distribution channels and the entire Texas fishing industry could be categorized into four general areas: (1) difficulty in obtaining sufficient quantities of fresh finfish to satisfy the existing demand, (2) pollution problems, (3) state governmental regulations affecting harvesting of finfish, and (4) business "myopia" and lethargy among firms in the channel of distribution.

#### ACKNOWLEDGEMENTS

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The one year project was partially funded by the Department of Commerce Grant Number 2-35213, and Texas A&M University. This report describes the findings and conclusions of the project which was completed on August 31, 1971.

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## CHAPTER I

### A STUDY OF THE MARKETING CHANNELS FOR FRESH FINFISH IN THE TEXAS FISHING INDUSTRY

#### Introduction to Study

There have been no organized attempts toward defining the distribution channels for Texas seafood products and the activities and practices associated with these channels. As a result, little is known about the path or paths taken by Texas seafoods in their journey from the sea to the consumer's plate. Also, it is generally accepted that the seafood industry in Texas is plagued with structural problems, many of which can be traced to the distribution channels and the nature and characteristics of the institutions in the trade levels within the channels.

From these observations it can be seen that there exists a need for research to be undertaken in the Texas seafood industry which will bring into the open problem areas within the distribution channels. The recognition and definition of the distribution channels and problem areas associated with the channels have to be the first steps taken in bringing about remedial actions which will improve the overall efficiency of the Texas seafood industry, providing greater consumer satisfaction with seafood products.

#### Statement of Problem

Before problem areas within the distribution structure of Texas seafoods can be resolved, and more generally, before problem areas

within the entire Texas seafood industry can be resolved, it is first necessary to know what distribution channels are used by the industry and what practices are associated with the channels. This research project is undertaken with the following objectives in mind: first to define and describe the paths taken by fresh seafood products originating in the Texas Gulf Coast Region as they move from the Gulf to the consumer's dinner plate; and second, to provide information pertaining to the performance of distributional activities and attending marketing and distributional problems at various trade levels within the channels.

#### Hypotheses

Although this study is not experimental in nature, and therefore not designed to "prove" anything in particular, it is possible to state hypotheses which can be verified or rejected during the course of the investigation:

1. Although there are many channels of distribution within the Texas Fishing Industry, there exists one prominent channel which is used more frequently than the rest of the alternative channels.
2. The great majority of fresh finfish products originating in the Texas Gulf Coast Region is distributed and consumed within the boundaries of the state of Texas.

The alternative hypotheses to be assumed upon rejection of the above hypotheses are:

1. There are many channels of distribution available to the Texas Fishing Industry, and all are used with equal frequency.

2. A substantial portion of the fresh finfish products originating in the Texas Gulf Coast Region is shipped outside the state of Texas.

#### Scope and Limitations

In the context of this study Texas seafoods will be taken to mean fresh finfish produced in the Texas Gulf Coast Region. Attention is focused upon fresh finfish as opposed to frozen finfish or other types of seafoods, such as shellfish and shrimp, for the following reasons: first, less is known about the finfish product category, as it has not been researched extensively; second, the shrimping industry in Texas is an entirely different operation, typically separate from and unassociated with the fishing industry, and is by far the larger and more researched. It is for these reasons that frozen finfish, shellfish and shrimp are not investigated in this study.

The wholesale trade level is the only trade level under direct investigation in this distribution study. Data and information concerning the other trade levels in the channels were obtained indirectly from the wholesale level. Justification for contacting only the wholesale trade level can be attributed to the fact that the wholesaler constitutes the "heart" of the distribution channels as he is the initial recipient of fresh fish from the harvesters or "dealers", (who are located on the coast and receive the fish from the harvester), and virtually all merchandise must pass through the wholesaler before it is distributed to the rest of the trade levels in the channel. Thus, by

investigating the wholesale trade level, initial input volumes to the industry and geographic harvest locations were determined, as well as: (1) the destinations of the merchandise upon leaving the wholesaler, and (2) the paths taken by the merchandise in reaching these destinations.

This distribution study is descriptive and analytical in nature. The project was designed to describe the channels used by the Texas Fishing Industry, and analyze data and information concerning these channels. There were neither statistical samples associated with the study, nor statistical measures involved in the analysis. Therefore the procedures, comparisons, measurements, etc., reflect observable rather than statistical significance.

#### Plan of Study

From contact with knowledgeable persons in the fishing industry in Texas, it was determined that the majority of fresh finfish wholesalers within the state of Texas could be interviewed personally since they are relatively few in number and are concentrated largely within the regions along the Texas Gulf coast and in the larger inland metropolitan areas of Houston, Dallas, Austin and San Antonio. During the study, twenty-seven of 210 Texas wholesalers of fresh finfish were contacted and questioned in areas relevant to the objectives of this study, fifteen of which were located along the Texas Gulf coast. The remaining wholesalers were in the inland metropolitan areas mentioned above.

The wholesalers were asked to provide information pertaining to:

1. Annual tonnages of the various species of fresh finfish purchased.
2. The names and geographic locations of suppliers.
3. Annual tonnages of fresh finfish sold.
4. Names and geographic locations of customers.
5. Marketing services which they performed.
6. Marketing and distribution problem areas within the distribution channels and within the Texas fishing industry as a whole.

The geographic areas to which fresh finfish were distributed by the wholesalers were categorized into four distribution areas:

1. Within fifty miles of the wholesaler's place of business, and still within the boundaries of the state of Texas.
2. Between fifty and one hundred miles of the wholesaler's place of business, and still located within the state of Texas.
3. Over one hundred miles from the wholesaler's place of business and still within the state of Texas.
4. Outside the state of Texas.

For each of these four geographic distribution areas, the following information was determined from each fresh finfish wholesaler contacted:

1. The type of customer (wholesaler, retail market, institution, or restaurant) to which fresh finfish were distributed.
2. The number of firms comprising each of the above types of customers to which fresh finfish were distributed.

3. Associated species and tonnages distributed to each type of customer.

Once these data were obtained from the fifteen coastal and twelve inland fresh finfish wholesalers, it was possible to determine the geographical areas to which finfish, originating on the Texas Gulf Coast Region, were distributed and ultimately consumed, as well as the paths taken by the finfish in reaching the areas in which they were consumed. This task provided a descriptive framework of the market structure for fresh finfish, illustrating the various "pipelines" or channels used by the Texas fishing industry in distributing the finfish and the tonnages of fresh finfish moving through each channel.

In Chapter II of this report, the theoretical evolution of distribution channels is discussed, providing an understanding of the reasons for their development and existence.

Chapter III presents data on the volumes of the various species of finfish landed in Texas during the last twenty years, placing special emphasis upon an analysis of landings reported in 1970. Also included in Chapter III is a discussion of quantities of fresh finfish imported from Mexico.

In Chapter IV, the various paths through which fresh finfish may flow in reaching the place of final consumption are discussed, providing an understanding of the overall channel structure of the Texas fishing industry.

The institutional components of the channels are discussed in terms of their roles and functions within the Texas fishing

industry, geographic distribution and concentration within the state of Texas.

Also included in Chapter IV is a brief consideration of the state zoning laws which influence the accessibility of coastal waters and bays in Texas to commercial net fishermen and some of the attending implications that these laws have with respect to the Texas fishing industry.

Chapter V provides information and data pertaining to the marketing channels identified and observed during the study, and are presented in two major sections. In the first section, the distribution channels are discussed in two separate stages: (1) distribution of fresh finfish by the coastal dealer trade level, and (2) distribution of fresh fish by the inland wholesalers. In addition, the retail trade level is considered as a whole, in terms of the relative importance of the four types of retailers which sell fresh finfish (vertically integrated retail markets, independent markets, institutions, and restaurants). Vertical integration between the wholesaler and retailer trade levels are considered, also.

In the second section of Chapter V, the distribution of fresh finfish at both the coastal dealer and inland wholesaler trade levels in terms of the geographic areas to which it is distributed, is considered.

Chapter VI presents information pertaining to marketing and distribution problem areas within the distribution channels and within

the Texas fishing industry as a whole. Various problem areas identified in the study are discussed in terms of:

1. Suppliers which provide the wholesalers with quantities of fresh finfish.
2. Customers which purchase fresh finfish from the wholesalers.
3. Marketing services and functions performed at the wholesaler trade level.
4. The Texas fishing industry as a whole.

Chapter VII summarizes and evaluates the information and data presented in this report, and points out various areas in which further research might be conducted.

## CHAPTER II

### EVOLUTIONARY CONSIDERATIONS OF DISTRIBUTION CHANNELS

#### Introduction

This chapter develops a conceptual framework for channels within a marketing system. It will be shown that distribution channels evolve because the movement of goods can be facilitated by employing intermediary entities to perform the marketing functions necessary in "bridging the gap" between producers and consumers.

The structure of channels system is discussed with respect to the performance of the functions within the channel system. More than one distribution channel may evolve for the same product because of a continuous effort within the channel system to allocate these functions among selected channel participants in order to optimize the overall efficiency of the channels and, consequently, the welfare of the channel members and ultimate consumers.

#### Channel Evolution

In primitive cultures, a marketing system does not exist because persons or family units are self-contained economic units. That is, the family units produce all the goods that they need for survival. There is no need for a marketing system because no exchange exists. But as cultures progress through developing skills and increased knowledge, the family units recognize that greater efficiencies can

be enjoyed by specializing in those goods which they are able to produce best, and by "hiring" someone else to make other goods necessary to satisfy their needs. As a result, exchange among persons and family units evolves. Here, the most basic and simplest marketing system is observed.

There are no intermediaries, or "middlemen" in this simple marketing system. But as time passes, it is realized that even greater efficiencies can be obtained by "hiring" someone else to facilitate the movement of goods between producers and consumers of goods. That is, a producer may realize that it is cheaper and more efficient to hire a third party -- a "middleman" -- to transport his products to the consumers of that product. Thus, we can begin to understand the reasons for the evolution of marketing channels.

#### Marketing Functions and Channel Structure

There are certain marketing functions which must be performed in achieving the goal of moving goods from producers to consumers. For example, these functions might include:

1. transportation of goods;
2. storage;
3. communication with market;
4. promotion; and
5. packaging.<sup>1</sup>

---

<sup>1</sup> In reality, the list of marketing functions is inexhaustive. Basic marketing textbooks, however, tend to limit the number to 4: (1) transfer of title, (2) physical movement of goods accompanied by necessary storage, (3) search for markets and sources of supply, and (4) the payment for goods. (See E.H. Lewis, Marketing Channels: Structure and Strategy, McGraw-Hill Book Co., N.Y., 1968, p. 3.)

These marketing functions must be performed in order to move the goods from producers to consumers. They cannot be eliminated if the channel's purpose is to be achieved. Therefore, someone must perform these functions. They may be performed solely by the producers and consumers of the goods, or intermediaries may be hired to take on the responsibility of performing some, or all, of them.

The structure of a distribution channel, that is, the combination of institutional components and the performance of marketing functions can be represented graphically in the matrix in Figure II-1.

#### Some Observations on Marketing Functions, Channel Structuring, and Channel Performance

From this matrix, it is possible to make some generalizations concerning the structure of distribution channels and the functions associated with the marketing task.

All marketing functions have certain characteristics in common. First, these functions cannot be eliminated. That is, in order for the movement of goods between producers and consumers to be achieved, these functions must be performed somewhere in the channel. Second, the functions are repetitive in that a given function may be performed several times by several channel participants. Third, the functions are divisible. That is, the performance of certain parts of a given function may be allocated among several firms in the same trade level or several trade levels within the channels. Finally, these functions are non-costless. There is a cost attached to their performance at each trade level.

A distribution channel may be viewed in terms of its length and its breadth. There may be many "trade levels" within a channel. Therefore the length of a channel is determined by the number of trade levels utilized within the channel in the performance of the various functions necessary to move the goods from producers to consumers. It is possible that all of the functions are performed by the producers and wholesalers, resulting in a relatively "short" channel. On the other hand, the performance of the various functions may be allocated among producers, wholesalers, retailers, and even consumers, consequently resulting in a relatively "long" channel.

The breadth of a distribution channel is determined by the number of institutional components within a given trade level. For example, there may be a relatively small number of wholesalers comprising the wholesale trade level, or there may be many wholesalers.

Performance of distribution channels may be evaluated in terms of the extent, quality, and efficiency with which the various marketing functions and services are performed. In addition, there is a "certainty" factor to be considered in the performance of the marketing functions.

With respect to the extent to which a function is performed, consider the function of transportation. For example, one might be concerned with how far the goods are shipped. That is, performance of the channels might be evaluated in terms of whether the goods are transported a relatively short or long distance in moving

the goods to consumers. When one speaks of the extent to which functions are performed, he is referring not to considerations of quality, but to the intensity or total "quantity" of functional performance.

In terms of the quality with which the functions are performed, consider the function of promotion. For example, how good a job is done in promoting the goods? Are the channel members doing a good or poor job in the promotion of the goods. In general terms, the quality of functional performance involves considerations of how well a given function is performed by channel participants.

Because there is a cost attached to the performance of functions, it is possible to consider the efficiency with which functions are performed, as reflected by the cost incurred by participants within the channels and the final price paid by ultimate consumers.

When evaluating performance of channel functions, it is necessary to consider the total cost of performing a given function in the channel. For example, in Figure 2-1, the total cost of the transportation function in the channel is reflected as  $\Sigma CF_1$ . A second consideration of performance is the total cost of performing all the various functions at each of the various trade levels. To illustrate, the total cost of performing all the functions at the retail trade level is reflected by  $CF_r$  in Figure 2-1. Finally, the cumulative effect of the costs of performing the functions at each trade level is the "total channel cost" of performing the functions which is reflected as  $\Sigma\Sigma$  in the lower right-hand corner of the matrix in Figure 2-1.

FIGURE II-1

## Functions

Trade Level	$F_1$	$F_2$	$F_3$	$F_4$	$F_5$	Total
Producer or Manufacturer	$CF_{11}$	$CF_{12}$	$CF_{13}$	$CF_{19}$	$CF_{15}$	$\Sigma CF_m$
Wholesaler	$CF_{21}$	$CF_{22}$	$CF_{23}$	$CF_{24}$	$CF_{25}$	$\Sigma CF_w$
Retailer	$CF_{31}$	$CF_{32}$	$CF_{33}$	$CF_{34}$	$CF_{35}$	$\Sigma CF_r$
Consumer	$CF_{41}$	$CF_{42}$	$CF_{43}$	$CF_{44}$	$CF_{45}$	$\Sigma CF_c$
	$\Sigma CF_1$	$\Sigma CF_2$	$\Sigma CF_3$	$\Sigma CF_4$	$\Sigma CF_5$	$\Sigma \Sigma CF$

Where:

$F_1$  = transportation

$F_2$  = storage function

$F_3$  = communication function

$F_4$  = promotion function

$F_5$  = packaging function

Example:

$CF_{23}$  = wholesaler's advertising cost

$CF_{25}$  = wholesaler's packaging cost

$\Sigma CF_m$  = total cost of functions at manufacturer's level

$\Sigma CF_1$  = total transportation and storage costs in the channel

The remaining dimension to be included in this discussion of channel performance is the "certainty" of performance. This term refers to the fact that someone within the channels, usually the producer or manufacturer, has a vested interest in the goods flowing through the channels and therefore, desires to control, more or less, the performance of the functions associated with moving these goods to ultimate consumers. This person or firm strives to control the extent, the quality, and the efficiency with which the functions are performed. He does this in several ways. He may own the channel outright--called vertical integration. He may contractually control channel activities, through franchising. Or he may choose to control middlemen's activities by selling to them on consignment. However he chooses, it is clear, certainty of performance is a viable dimension of channel performance.

#### Implications

In considering the implications of the previous discussion, it is possible to see how and why there may evolve more than one channel of distribution for the marketing of a single product. This is demonstrated empirically in Chapter IV. There it is shown that fresh finfish may be distributed to ultimate consumers through multiple channels utilized by the Texas fishing industry.

Because the marketing functions must be performed in moving goods to ultimate consumers, and because there is a cost associated with the performance of these functions, the economic contest becomes a

continuous endeavor to allocate these functions among channel participants in such a manner that will optimize the overall efficiency of the channel and consequently the welfare and satisfaction of the channel participants and the ultimate consumers of the product.

Functions may be shifted among channel participants in an attempt to increase efficiency. In addition, new members may be added to the channels, or some members may drop out of the channels. At any given trade level within a marketing channel, the marketing functions will be performed by a member for at least three reasons: (1) the function can be performed better; (2) the function can be performed cheaper, or (3) it is feared that the functions will not be performed at all if shifted to another member of the channel. Members may be forced out of the channels if (1) they cannot perform the functions efficiently relative to other members; (2) if they cannot perform the functions better, relative to other members; or (3) if they cannot or will not perform the functions at all.

At the same time the needs and desires of the ultimate consumers may change over time, placing new demands upon the existing channel structure and creating new opportunities for new channel members or eliminating opportunities for existing members. Consequently, the channel structure changes in an attempt to satisfy the changing consumer needs and demands. Sometimes these changes occur rapidly, and at other times decades and generations pass with no apparent change at all.

Under the free enterprise system, participants within the marketing channels are always on the alert for ways to improve their "package of goods and services" to ultimate consumers, and for ways of increasing efficiency through recombining and re-allocating performance of the marketing functions among channel members. It can be expected that marketing channels will continue to evolve and change, depending upon the efficiency with which the marketing functions can be performed and the shifts or changes in the goods and services desired by ultimate consumers.

## CHAPTER III

### THE FINFISH SPECIES ASSOCIATED WITH THE TEXAS FISHING INDUSTRY

#### Introduction

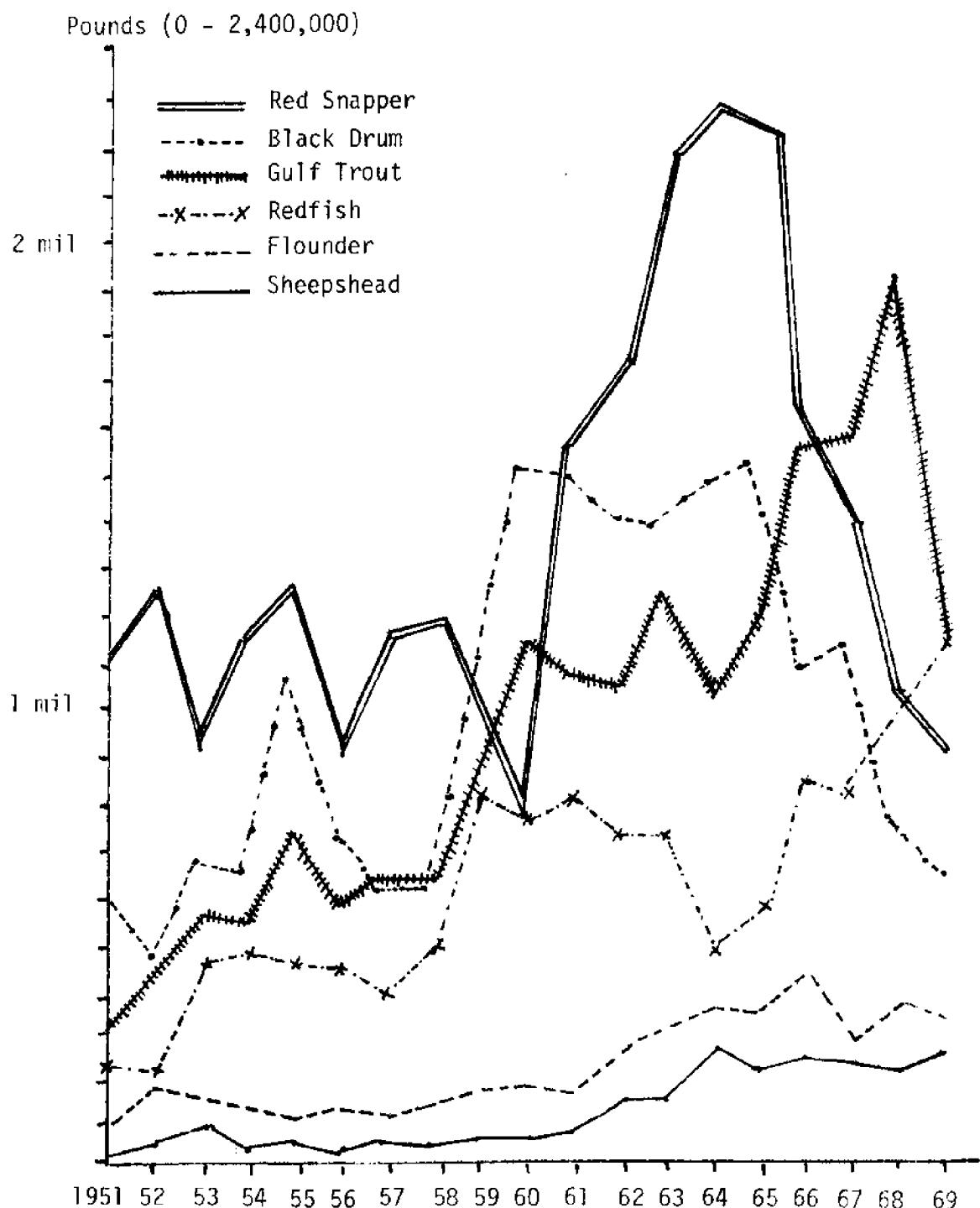
Before beginning to investigate the channels used by the Texas fishing industry in moving the finfish products from the Gulf Coast to the place of final consumption, it is helpful to learn of tonnages of the various species of fish which move through these channels. This chapter presents data on the volume of the various species of finfish landed in Texas during the last twenty years, placing special emphasis upon an analysis of the landings reported in 1970. Also included in this chapter is a discussion of quantities of fresh finfish imported from Mexico relative to the total finfish supply. These considerations provide fuller understanding of the makeup of the supply or "production" aspects of the Texas fishing industry, and reveal the relative importance of Texas landings and Mexican imports, the various coastal regions in Texas which contribute to the total supply, and the various species of finfish associated with the industry.

#### Texas Landings

The species associated with the Texas fishing industry are the Red Snapper, Black Drum, Redfish, Flounder, Sea Trout, and Sheepshead. Although these six species are not the only species landed in Texas, they are the most common species commercially harvested and sold for final human consumption. Table 3-1 indicates the annual Texas landings

TABLE 3-1

Commercial Landings for 6 Major Texas Finfish (1951 - 1969)



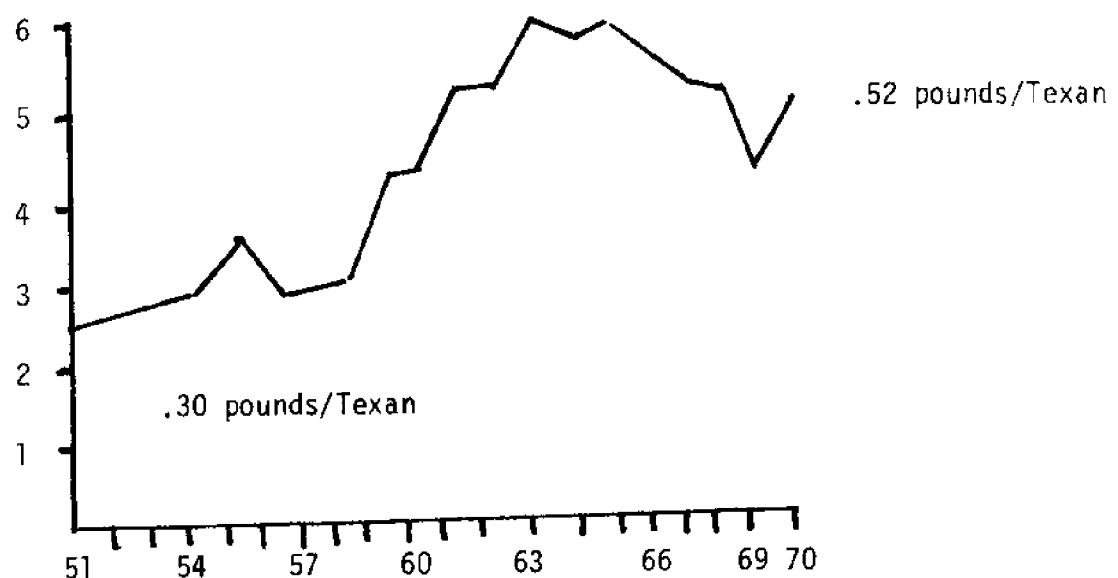
Source: Texas Landings, United States Department of Commerce,  
National Marine Fisheries Service

for these six species from 1951 to 1969. Many "peaks and valleys" are observed in the charted landings, but an increasing trend is evident for all the species except Red Snapper, with the slope of the trends varying among individual species. The charts provided in Table 3-2 show an increasing trend for the total Texas landings since 1951, although reported tonnages have been decreasing since 1963. However, a significant increase is noticed in 1970 landings as compared to 1969 landings.

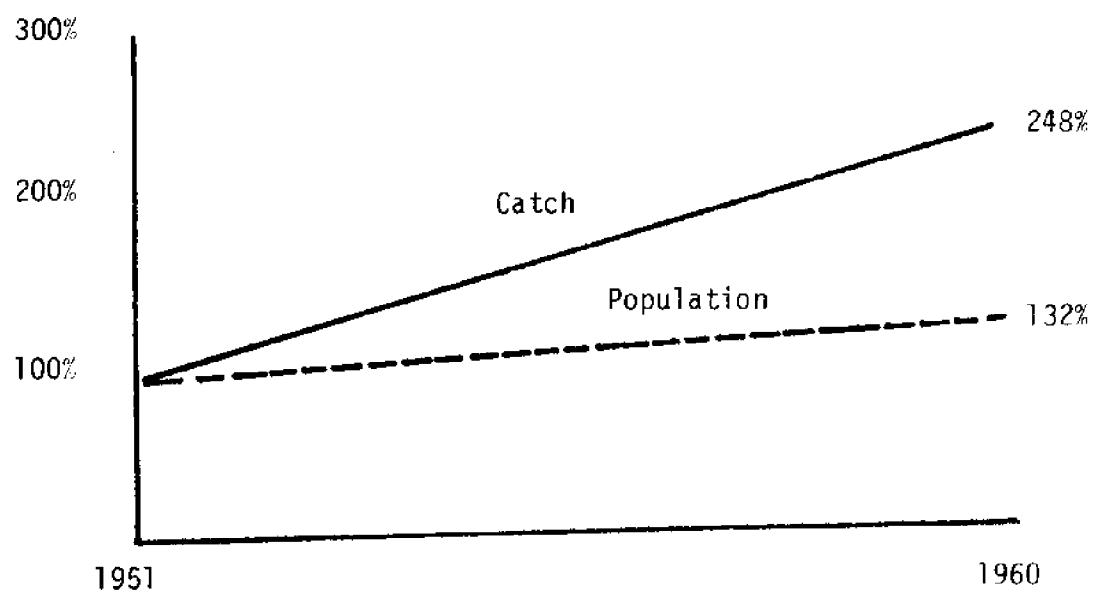
Historically, Sheepshead and Flounder have constituted a rather small percentage of the total catch, while the Black Drum, Redfish, Sea Trout and Red Snapper species have made up the greater bulk of the total catch. In recent years, however, Red Snapper and Black Drum are observed to be on the downward trend, constituting a progressively smaller percentage of total landings each year, while Sea Trout and Redfish are increasing in importance. The decreasing importance of Red Snapper and Black Drum can be at least partially attributed to the fact that Red Snapper is reportedly becoming relatively scarce, while fewer persons are consuming Black Drum since better quality species are demanded due to increasing discretionary income. That is, as income rises, Black Drum among the various fish species might be considered an inferior good. In addition, the recent closure of the lower Laguna Madre Bay areas to commercial netting and seining were reported to have affected the total catch of Black Drum. In opposite manner, the increasing importance of Sea

TABLE 3-2

Total Texas Landings for Six Major Species: 1951-1970  
 (Red Snapper, Redfish, Black Drum, Sea Trout, Flounder, Sheepshead)



#### Texas Catch -- Ahead of Population Growth



Trout and Redfish in recent years might be explained by people with more discretionary income are "moving up" to these species, which are perceived to be of better quality. In addition to the increasing demand for the Sea Trout and Redfish species, evidence indicates that they are relatively abundant and present no real difficulties in harvesting an adequate supply.

Data reported on the quantities of finfish landed at Texas fishing ports during past years revealed that the per capita consumption of finfish in Texas has changed little. The figures in Table 3-2 indicate that the average quantity of finfish consumed by the individual Texan in 1951 was slightly less than one-third pound per year. Almost twenty years later, in 1969, the figure had increased to slightly over one-half pound per person--suggesting an approximate increase during these twenty years of only three ounces per person. It is also noticed that the total catch in Texas has increased 148% over the total catch in 1951, while the population has shown an increase during this same period of time of only 32%.

#### Finfish Imports from Mexico

In addition to finfish landed in Texas, another element greatly influencing the total supply of finfish available for consumption in Texas is the quantity of finfish imported into Texas from Mexico at Brownsville and Port Isabel. Table 3-3 shows that the ratio of Mexican imports to Texas landings has risen considerably during recent years; from 10% in 1967 to 86% in 1970. Additionally, the ratio of

TABLE 3-3  
Landings Vs. Imports, 1966-1970

Year	Texas Landings	Mexican Imports	%	Total Supply
1966	5,562,800	876,200	13	6,439,000
1967	5,246,100	535,300	9	5,781,400
1968	5,150,300	626,100	10	5,776,400
1969	4,000,000	2,625,300	39	6,625,300
1970	4,953,000	4,204,400	45	9,157,600

Source: Texas Landings, 1970

Mexican imports to the total finfish supply (Texas landings plus Mexican imports) has risen from 9% in 1967 to 45% in 1970. In Table 3-4, the imported tonnages of each of the six major species are shown, providing a picture of the changes in the composition of Mexican imports during the past five years.

The most important implication offered by these figures concerning Mexican imports is that the Texas fishing industry is becoming more dependent upon non-domestic sources in satisfying the consumer demand for fresh finfish. Several reasons might be attributed to this increasing dependence upon fresh finfish imports from Mexico. First, Texas fresh finfish wholesalers have experienced an increasing difficulty in obtaining sufficient quantities of fresh finfish to satisfy their existing demand. It was reported that this difficulty was at least partially caused by the difficulty in attracting new harvesters to the industry, while many of the existing commercial fishermen have either given up fishing, entirely or partially, seeking greater monetary rewards that are available from jobs in other vocational fields.

Second, it was reported that coastal pollution has contributed to the Texas fishing industry's increasing reliance upon Mexican imports, in that it has possibly caused a movement of finfish species to other less polluted areas, such as the coastal waters of Mexico, and has caused an "oily" taste in the flesh of finfish taken from polluted waters, thereby decreasing the marketing opportunity for Texas harvesters and wholesaling firms.

TABLE 3-4  
Annual Mexican Imports for Six Major Species - 1966-1970

Specie	1966	1967	1968	1969	1970
Black Drum	22,800	23,200	61,800	520,800	1,213,300
Red Fish	31,700	8,900	224,300	873,500	842,600
Red Snapper	568,100	366,100	168,600	320,900	750,000
Flounder	4,300	-0-	100	24,600	49,100
Sea Trout	228,800	128,800	137,400	826,200	1,298,000
Sheepshead	20,500	8,300	33,900	59,300	51,400
TOTAL	876,200	535,300	626,100	2,625,300	4,204,400

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Services, Division of Statistics & MRT News; E. J. Barry, New Orleans, Louisiana

Third, it was reported that the state regulations which prohibit the use of nets and seines in the preponderance of coastal waters and bays in Texas have contributed to a difficulty in harvesting sufficient quantities of finfish to satisfy the existing demand. In addition, the lack of such netting and zoning restrictions and abundance of finfish populations in Mexico, in combination with the "cheap labor" available there, make it more attractive to import finfish from Mexico and at far lower prices than must be paid to Texas harvesters. These considerations mentioned above make it possible to understand the Texas fishing industry's increasing dependence upon fresh finfish imported from Mexico.

#### Analysis of the 1970 Landings

The Texas Gulf coast is divided into five sections called fishing districts for which records are kept by the National Marine Fisheries Service and the Texas Parks and Wildlife Department on the tonnages of each specie landed in each district. Beginning with the northern-most district, these are: the Sabine, Galveston, Matagorda, Aransas, and Laguna Madre districts. Figure 3-1 provides a map indicating the locations and boundaries of each district.

Table 3-5 illustrates the contributions to total Texas landings made by each of the districts in 1970. The district which made the largest contribution was the Laguna district, with reported landings of 2,689,787 pounds, followed by the Aransas district with 1,044,103, the Galveston district with 567,067, the Matagorda district with

FIGURE 3-1

## TEXAS COASTAL FISHING DISTRICTS

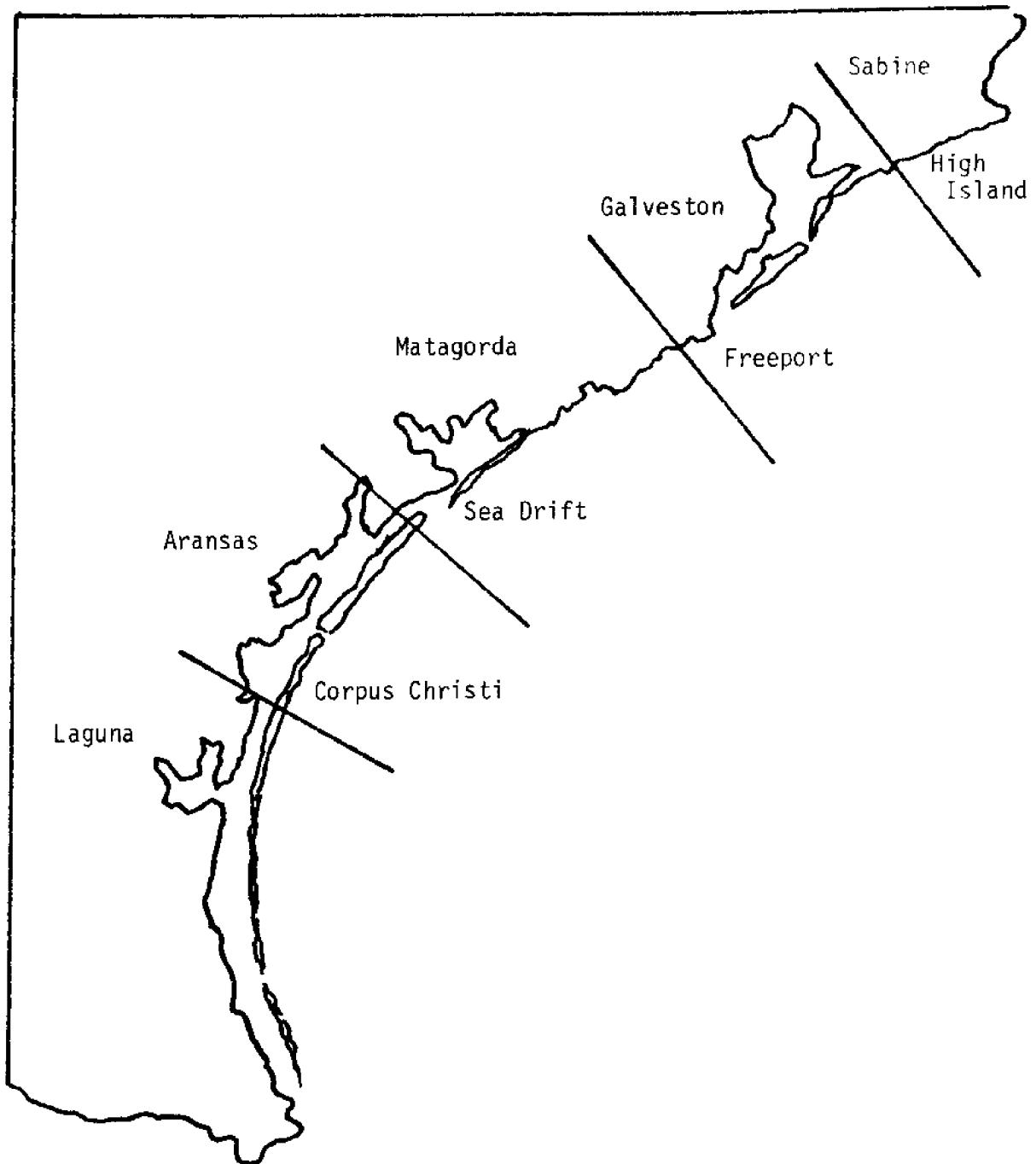
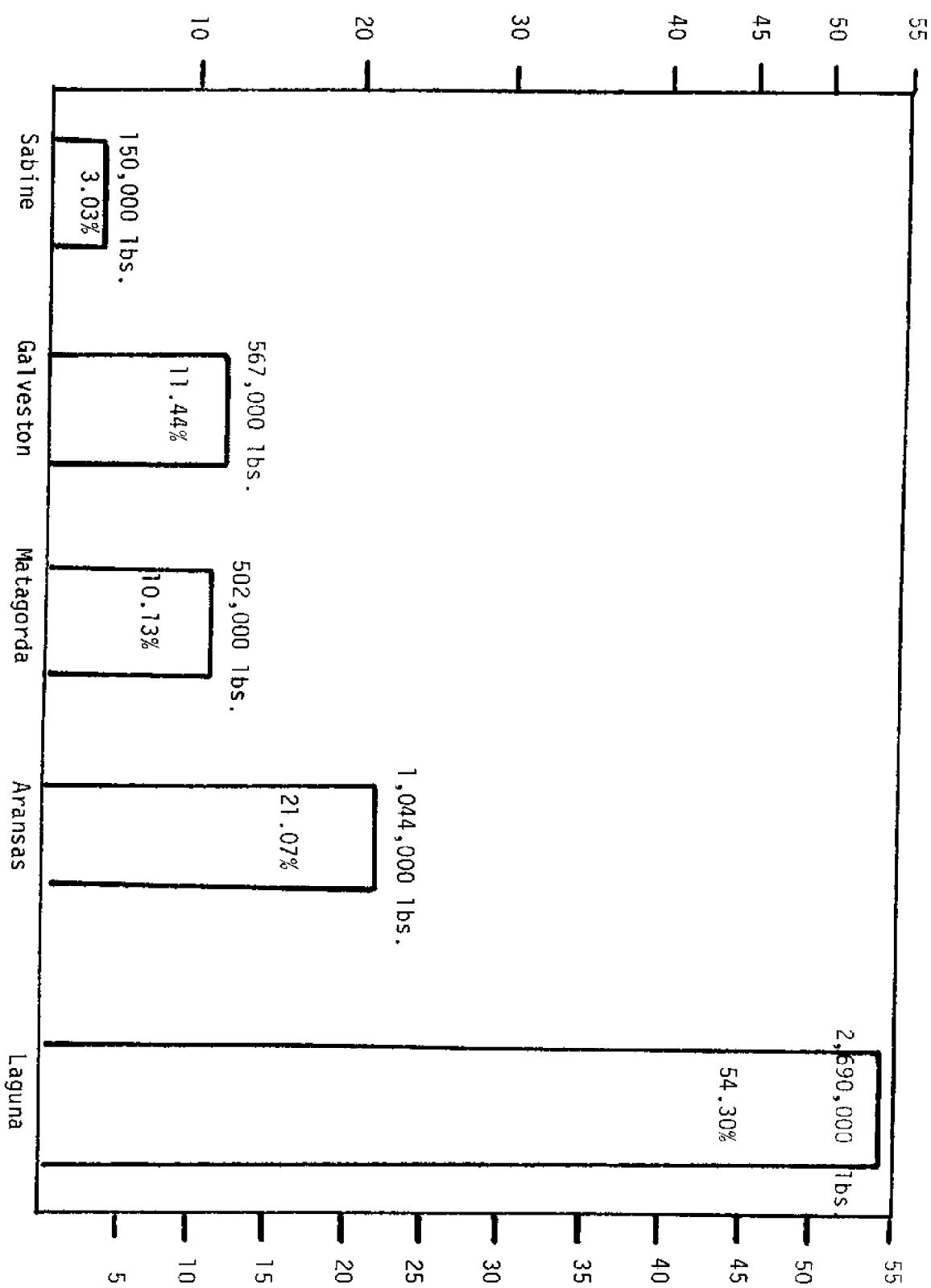


Table 3-5

Relative Share of Total Texas Landings for Each of the Five Fishing Districts  
(% of Total Texas Landings)



502,258, and finally the Sabine district with a reported 150,194 pounds. The total tonnage of the finfish species landed by all five districts in 1970 was 4,953,000 pounds.

In examining the relative importance of each of the districts, it is interesting to learn that 54% of the total Texas landings are landed in the Laguna district alone--more than twice the amount provided by all the other districts combined. The two southern-most districts, the Laguna and Aransas districts, together provide 75% of the supply of finfish made available by Texas producers. The smallest contribution was made by the Sabine district with only a 3% share.

#### Relative Importance of the Species

Table 3-6 compares the relative importance of each of the six species landed in Texas during 1970. The tonnages are shown in round weights to facilitate comparison. Redfish and Sea Trout constitute the greater portion of total landings, with shares of 32% and 23%, respectively, which is in keeping with the trend noted earlier in this report.

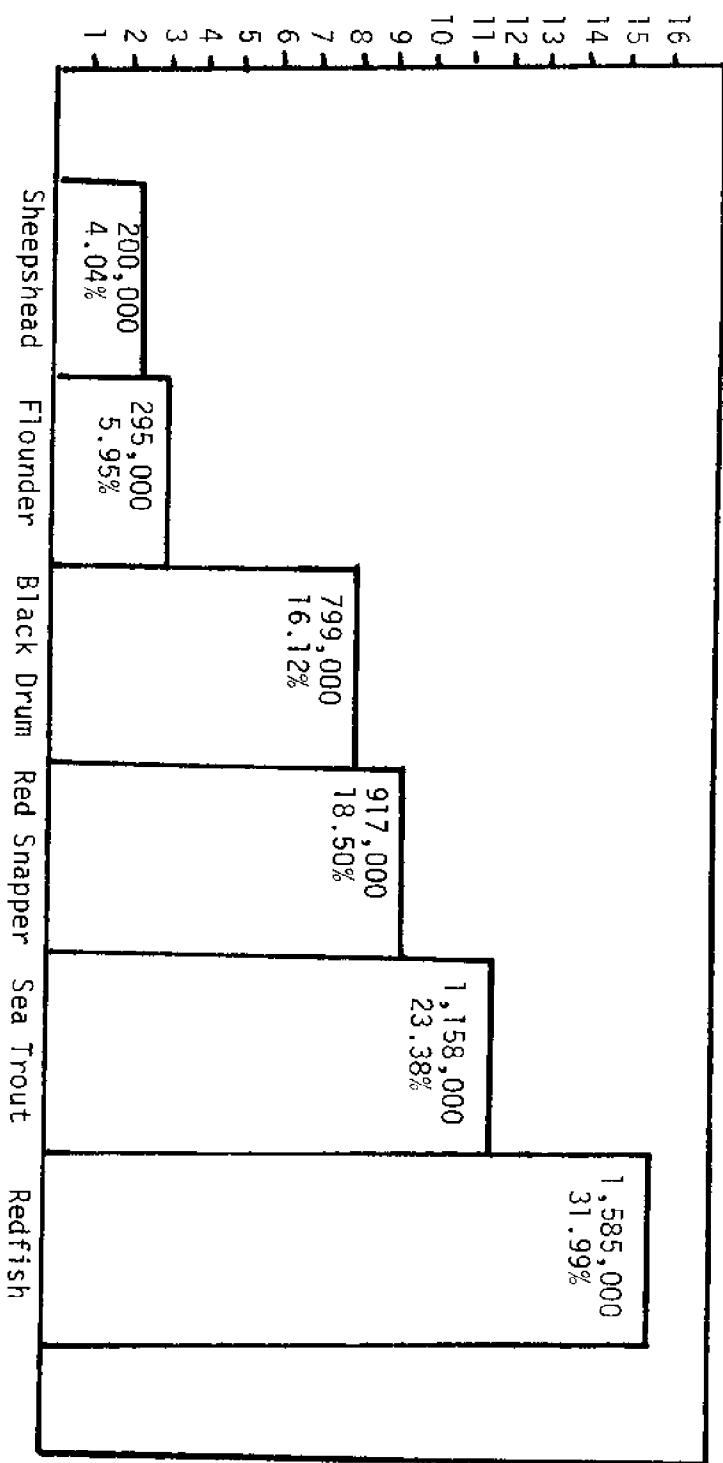
Tables 3-7 and 3-8 show the aggregate tonnages of the six species of finfish landed in each district, and illustrate the importance of each species within each district. In the Sabine district, the greater portion of the total landings are attributed to the Red Snapper species, with a share of 72% of the total Sabine district landings. The remaining portion of the landings in this district

TABLE 3-6

Commercial Landings of Six Major Texas Finfish, 1970 (100,000 lbs.)

Total Landings = 4,953,000

30

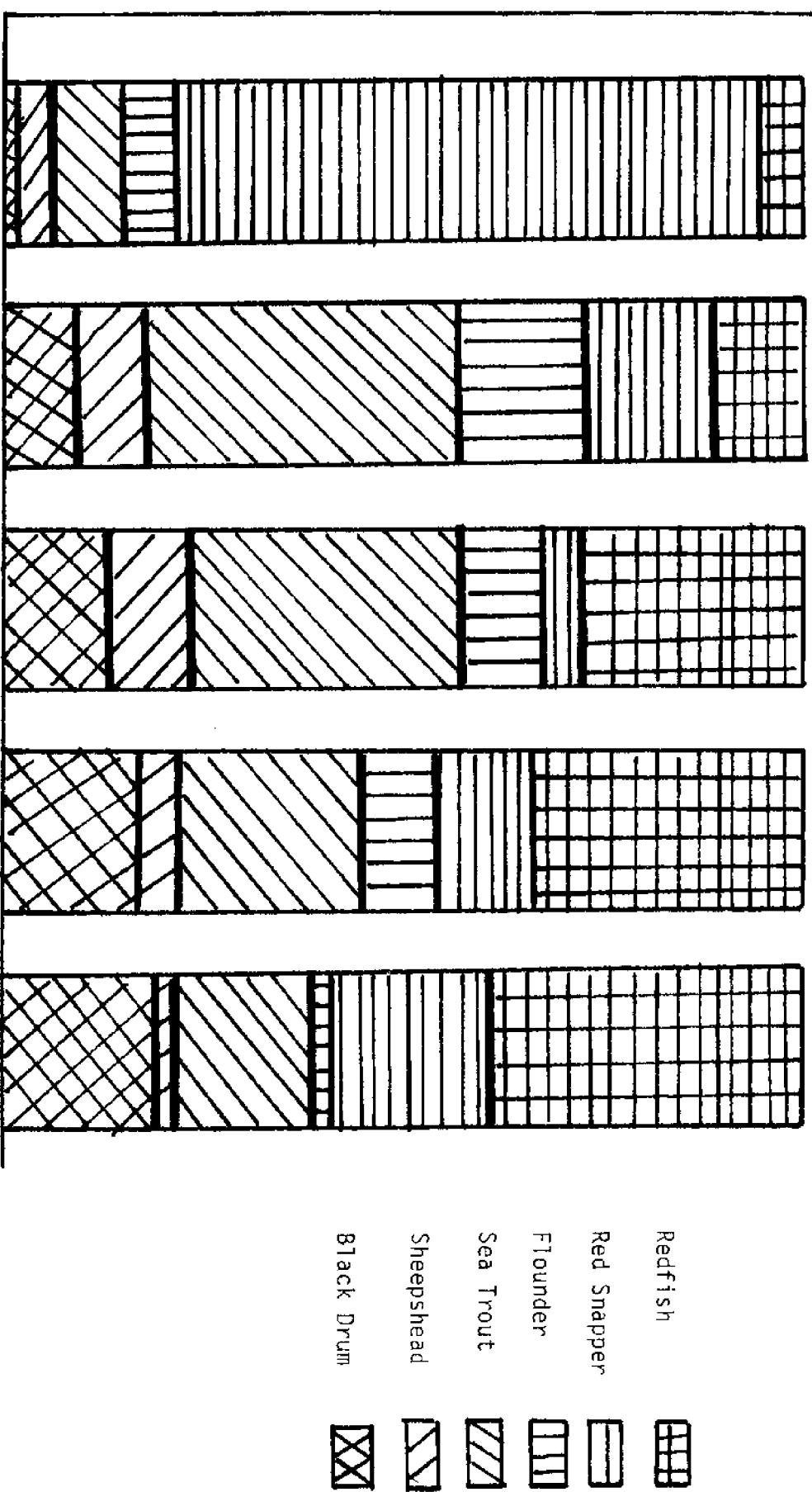


Source: Texas Landings, United States Department of Commerce, National Marine Fisheries Service

Relative Importance of the Six Major Species in Percentages of Total District Landings

100%.

31



Source: Texas Landings, United States Department of Commerce, National Marine Fisheries Service

TABLE 3-8

Species Landings for Each of the Five Fishing Districts, 1970  
(Pounds)

District	Redfish	% of Total	Red Snapper	% of Total	Flounder	% of Total	Sea Trout	% of Total	Sheepshead	% of Total	Black Drum	% of Total	Total Landings
Sabine	7,054	4.69	108,420	72.18	11,737	7.81	14,398	9.58	5,708	3.80	2,877	1.91	150,194
Galveston	55,982	9.87	84,432	15.77	94,757	16.71	224,543	39.59	50,879	8.97	51,474	9.07	567,067
Matagorda	137,970	27.46	25,548	5.08	49,840	9.92	168,595	33.56	53,956	10.74	66,349	13.21	502,258
Aransas	350,777	33.59	125,311	12.00	101,551	9.72	238,138	22.80	60,358	5.78	167,968	16.08	1,044,103
Laguna	1,032,823	38.39	568,087	21.12	37,266	1.38	512,491	19.05	29,271	1.08	509,849	18.95	2,689,787
Total Species Landings	1,584,606	916,798	295,151	1,158,165	200,172	798,517	4,953,409						

are allocated fairly evenly among the other five species, except for Black Drum, which makes up only 2% of the district landings. Even though Red Snapper constitutes 72% of total landings in the Sabine district, it is noted in Table 3-9 that this district provides only 12% of the total tonnage of Red Snapper landed in all five districts during 1970. In addition, the Sabine district is relatively unimportant in terms of contributions of each of the other five species to total Texas landings. This district contributes less than 5% of the total Texas landings of each of the other five species (see Table 3-9).

In the Galveston district, the predominant species is the Sea Trout, which constitutes approximately 40% of the total landings in this district. Other significant species in the Galveston district are the Red Snapper and Flounder. Considering the total tonnages of Red Snapper and Sea Trout landed in Texas during 1970, Galveston contributed 10% and 20% respectively. The Galveston district provides approximately 26% of the total landings of Sheepshead, and 32% of the total landings of Flounder. Only 4% of total Redfish landings, and 7% of the Black Drum landings originate in the Galveston district.

For all practical purposes, the Matagorda district and the Galveston district are equal in terms of district tonnages, furnishing respective tonnages of 502,258 pounds and 567,067 pounds. The primary differences in the two lie in the landings of the Redfish, Red Snapper, and Flounder species, and the relative importance of each species within the districts. The Redfish species constitutes

TABLE 3-9

Relative Importance of the Fishing Districts in Terms of Contributions to  
Total Texas Landings of Each Species

District	Black Drum	Redfish	Red Snapper	Sea Trout	Flounder	Sheeps- Head
Sabine	.50	.50	11.75	1.25	4.00	2.75
Galveston	6.50	3.50	9.75	19.50	32.00	25.50
34	8.25	8.75	2.75	14.50	17.00	27.00
Matagorda	21.00	22.00	13.75	20.50	34.50	30.25
Aransas	63.75	65.25	62.00	44.25	12.50	14.50
<b>Total</b>	100%	100%	100%	100%	100%	100%
Species Landings	798,517	1,584,606	916,798	1,158,165	295,151	200,172

27% of the Matagorda district landings, and the Red Snapper and Flounder species constitute only 5% and 10% respectively.

In the Aransas district, a large increase is noted in total district landings compared to the Sabine, Galveston, and Matagorda districts. The greater portion of the landings in the Aransas district is composed of Redfish, Sea Trout, and Black Drum, with respective shares of 34%, 23% and 16%--totaling approximately 75% of the landings in this district. The remaining 25% is composed of Red Snapper, Flounder, and Sheepshead. Sheepshead is the least significant with only 6% of total landings. In the context of contributions to total Texas landings of each specie, the Aransas district furnishes relatively significant tonnages of all six species. This district supplies 21% of the Black Drum, 22% of the Redfish, 14% of the Red Snapper, 21% of the Sea Trout, 35% of the Flounder, and 31% of the Sheepshead that are taken from the coastal waters of Texas.

Ninety-eight percent of the finfish landed within the boundaries of the Laguna Madre district are composed of the Redfish, Red Snapper, Sea Trout and Black Drum species. Redfish is the most significant of the four, constituting 39% of total district landings. Next in importance is Red Snapper constituting 21% of the landings in this district. Sea Trout and Black Drum species are equal in relative shares, each constituting 19% of total district landings. The least important species in this district are the Flounder and

Sheepshead, collectively providing the remaining 2% of the district landings. In terms of contributions to total Texas landings of each of the six species, it is noticed in Table 3-9 that the Laguna Madre district provides a substantial portion of the total landings of the Black Drum, Redfish, Sea Trout, and Red Snapper species. In fact, the greater portion of total Texas landings for the Redfish, Black Drum, and Red Snapper species originate in this district, with respective specie contributions of 65%, 64% and 62%. The Laguna Madre district does not provide nearly so great a proportion of total Flounder and Sheepshead landings; however, supplying only 13% of total Flounder landings in Texas, and only 16% of the total Sheepshead landings. One final comment in discussing the Laguna Madre district is that it provides 54% of the total finfish supply made available by Texas harvesters. The tonnage of finfish landed in the Laguna Madre district constitutes 29% of the total supply of finfish available for consumption (Texas landings and Mexican imports), clearly a significant relative share.

In summary, recognition should be made of the significance and importance of the Aransas and Laguna districts with respect to their contributions to the total supply of finfish landed in Texas in 1970. These two districts collectively furnished 75% of total Texas landings in 1970. Additionally, these two districts supplied 85% of the Black Drum, 87% of the Redfish, 76% of the Red Snapper, 65% of the Sea Trout, 47% of the Flounder, and 45% of the Sheepshead

species that were reported in 1970. From these data, it is possible to learn of the more than substantial role played by these two districts in the landings of Texas finfish.

#### Summary

In this chapter, it was noted that there has been an increasing trend in annual Texas landings of the six major finfish species during the last twenty years. Total landings for five of the individual species have also been increasing annually, with the only exception being Red Snapper.

It was shown that the Sheepshead and Flounder species have historically constituted a rather small percentage of the total catch, while the remaining four species have constituted the greater bulk of the total landings. It was also shown that in recent years Red Snapper and Black Drum have been decreasing in relative importance, while the Sea Trout and Redfish species have shown an increasing trend in relative importance.

Relative to the total finfish supply available for Texas consumption, quantities of finfish imported from Mexico were shown to be increasing in importance since 1967. This information indicates that the Texas fishing industry is becoming more dependent upon Mexican imports in satisfying the demand for finfish. Reasons attributed to this increasing dependence upon Mexico can be partially attributed to an increasing difficulty on the Texas wholesalers' part in obtaining sufficient quantities of fresh finfish from Texas harvesters, coastal pollution, and governmental regulation of nets and seines in harvesting

finfish, and the "cheap labor" available in Mexico. Finfish species can be imported from Mexico at far lower prices than must be paid to Texas harvesters.

The five coastal fishing districts in Texas were discussed and analyzed in terms of relative importance in both total and individual specie contributions to annual Texas landings in 1970. These five fishing districts, listed in descending order according to relative importance are: Laguna Madre, Aransas, Galveston, Matagorda, and Sabine. The two southern-most districts--the Laguna Madre and Aransas districts--collectively provided 75% of the total tonnage of finfish landed in Texas. In terms of absolute tonnages, these two districts provided respective tonnages of roughly 2,700,000 and 1,050 pounds, constituting 3,750,000 of the nearly 5,000,000 pounds of finfish landed during 1970.

## CHAPTER IV

### THE STRUCTURE OF THE TEXAS FISHING INDUSTRY

#### Introduction

The purpose of this chapter is to provide an understanding of the overall channel structure of the Texas fishing industry by describing the various paths through which fresh finfish may flow in reaching the place of final consumption. An analysis of these various channels is given in Chapter V. This chapter is divided into two parts; the first provides information pertaining to the institutional components of the channels and their roles and functions, geographic distribution, and concentration within the state of Texas. The second section includes a brief consideration of the zoning laws and regulations which influence the accessibility of coastal waters and bays in Texas by commercial net fishermen and some of the implications of these laws with respect to the Texas fishing industry.

#### The Institutional Components of the Industry

The Producers or Harvesters. Although the producers or harvesters of fresh finfish are not normally viewed as distributional components of the channels, it is necessary to gain some idea of the number of these fishermen and their vessels and boats operating in the state of Texas since they provide the input tonnages of finfish to the industry. Table 4-1 provides a brief summary of the number of fishermen, vessels, and boats operating in Texas during 1968, the

TABLE 4-1  
Summary of Operating Commercial Fishing Units  
In Texas, 1968

I. Commercial Fishermen:

A. On vessels	5,391
B. On boats and shore:	
1. Regular	850
2. Casual	748
TOTAL	6,989

II. Vessels and Boats

A. Vessels, motor	1,903
B. Boats, motor (less than 5 tons)	1,219
C. Other boats	46
	3,168

Source: Unpublished data provided by Bill Schwartz,  
Seafood Marketing Specialist, Texas Parks and Wild-  
life Department

latest year for which this information was available. If records were available for the current year, however, it is quite likely that the figures would be lower than the 1968 figures, since participants in the industry have reported a decreasing trend in the number of commercial fishermen operating in Texas, especially the younger fishermen.

Commercial fishing is an extremely difficult way to earn a living, and many commercial fishermen have come to realize that more dollars can be more easily made in other vocational fields. In addition, many of those who are still fishing commercially are "moonlighters"; that is, operate a fishing boat in addition to holding down other permanent jobs. Many wholesalers investigated during this study indicated that this is an important factor attributed to a growing deficiency of quantities of finfish harvested in certain areas along the Texas Gulf coast. Because many fishermen regard their fishing jobs as secondary jobs, their efforts spent at fishing decrease, and contribute to the shortage in the total finfish supply in the area. These kinds of problems, as well as other problems characteristic to the industry, will be further considered in Chapter VI.

Coastal "Dealers" (Wholesalers). The "dealer" is the first important link in the chain or structure of the distribution channels since he is, typically, the first to receive the fish from the harvesters. In the following chapters, the terms "coastal dealer", "dealer", and "coastal wholesaler" are used synonymously. For

purposes of this study, a "dealer" is defined as a firm located on the coastal waters or bays which purchases finfish directly from the harvesters. In many cases, the dealer maintains fishing boats of his own, or financially supports one or more individuals who own boats who bring the dealer their catch.

Upon receiving finfish from the harvesters, the dealer typically removes the scales, gills and viscera, and may or may not process them further, depending upon the type of institution within the channels to which it is sold. If the finfish are sold to the wholesale trade level, the dealer does not process the fish any further than removing the scales, gills and viscera. However, restaurants and other retail institutions may request additional processing, and in this case the dealer sells the finfish to them in the form of steaks and fillets.

In distributing finfish, the dealer either sells to wholesale institutions which in turn distribute the finfish to successive trade levels, or bypasses the wholesaler, selling directly to the retail trade level. In many instances, a dealer may sell to other dealers. Such a situation is normally observed when additional quantities of finfish are needed to fill an order from a customer, or when excessive amounts of finfish are accumulated. In both cases, transactions may occur between two or more dealers.

A significant number of the coastal dealers also sell finfish directly to ultimate consumers through their own retail markets.

The significance and importance of vertical integration between the coastal dealer and retail trade levels is discussed in Chapter V.

To provide insight into the dealer trade level, it is helpful to learn of the degree of market concentration observed among the dealer firms in Texas, and the degree of market concentration observed among dealer firms within the various fishing districts and coastal counties.

In 1969, sixty-four firms purchased finfish from harvesters, eighteen of which accounted for 75% of the total quantity purchased by all sixty-four dealers. Table 4-2 provides a chart indicating the relative share of each of these eighteen dealers, as well as the fishing district and county in which they are located. (See Appendix A for information concerning all sixty-four dealers.)

The Laguna Madre district accounts for the largest number of dealers as well as the largest relative share of the total tonnage; seven dealers in this district account for 35% of the total tonnage handled by all sixty-four dealers. Six dealers are located in the Aransas district, and account for 22% of the total tonnage. Collectively, the thirteen dealers located in these two districts alone account for 57% of the total tonnage of finfish handled by all sixty-four dealers.

In considering the relative shares of the coastal counties, Cameron, Nueces, and Aransas counties account for 18%, 17% and 13% of the total tonnage respectively. Willacy County, with only one dealer, has 6%.

TABLE 4-2  
Relative Importance of 18 Major Finfish Dealers (1969)

Dealer Number	Tonnage	Fishing District	Coastal County	% of Total	% of Total
5010	384,000	Laguna	Nueces	7.25	7.25
4120	343,000	Aransas	Aransas	6.50	13.75
5090	318,000	Laguna	Willacy	6.00	19.75
3110	303,000	Matagorda	Matagorda	5.75	25.50
4040	287,000	Aransas	Nueces	5.50	31.00
5020	280,000	Laguna	Cameron	5.00	36.00
5030	242,000	Laguna	Cameron	4.50	40.50
5050	232,000	Laguna	Cameron	4.50	45.00
4023	228,000	Aransas	Aransas	4.25	49.25
5040	214,000	Laguna	Nueces	4.00	53.25
2025	213,000	Galveston	Galveston	4.00	57.25
5100	178,000	Laguna	Cameron	3.25	60.50
1070	170,000	Sabine	Jefferson	3.25	63.75
2480	167,000	Galveston	Galveston	3.25	67.00
4024	127,000	Aransas	Matagorda	2.50	69.50
4090	118,000	Aransas	Aransas	2.25	71.75
2520	98,000	Galveston	Galveston	1.75	73.50
4200	82,000	Aransas	Not Available	1.50	75.00
TOTAL	3,960,000*				75%

The significance of these data concerning the dealer trade level is that 75% of the tonnage of finfish handled by the sixty-four dealers in 1969 was concentrated among only eighteen of the dealers. Stated another way, 30% of the dealers accounted for 75% of the total tonnage of finfish landed in Texas. It is also important to note that, as was the case with absolute tonnages of finfish landed in each of the districts, a greater portion of the Texas finfish volume is handled by dealers located in the Aransas and Laguna Madre districts.

Inland Wholesalers. Basically, the inland wholesaler is the same as the dealer, since both sell finfish to retailers. The distinction between the two is that the dealer is a wholesaler that purchases directly from the harvesters, whereas the inland wholesaler typically purchases finfish from the dealers, and distributes to the retail trade level.

Transactions may also occur among different institutions within the inland wholesale trade level. As was the case in the dealer trade level, these transactions normally occur when one firm needs additional quantities of finfish or has an excessive amount of finfish on hand which is not needed to fill existing or immediately expected orders.

Most of the larger inland wholesalers, as well as the dealers, maintain delivery trucks and generally distribute to accounts located within a fifty-mile radius from their place of business, although

some customers choose to pick up their orders in their own trucks.

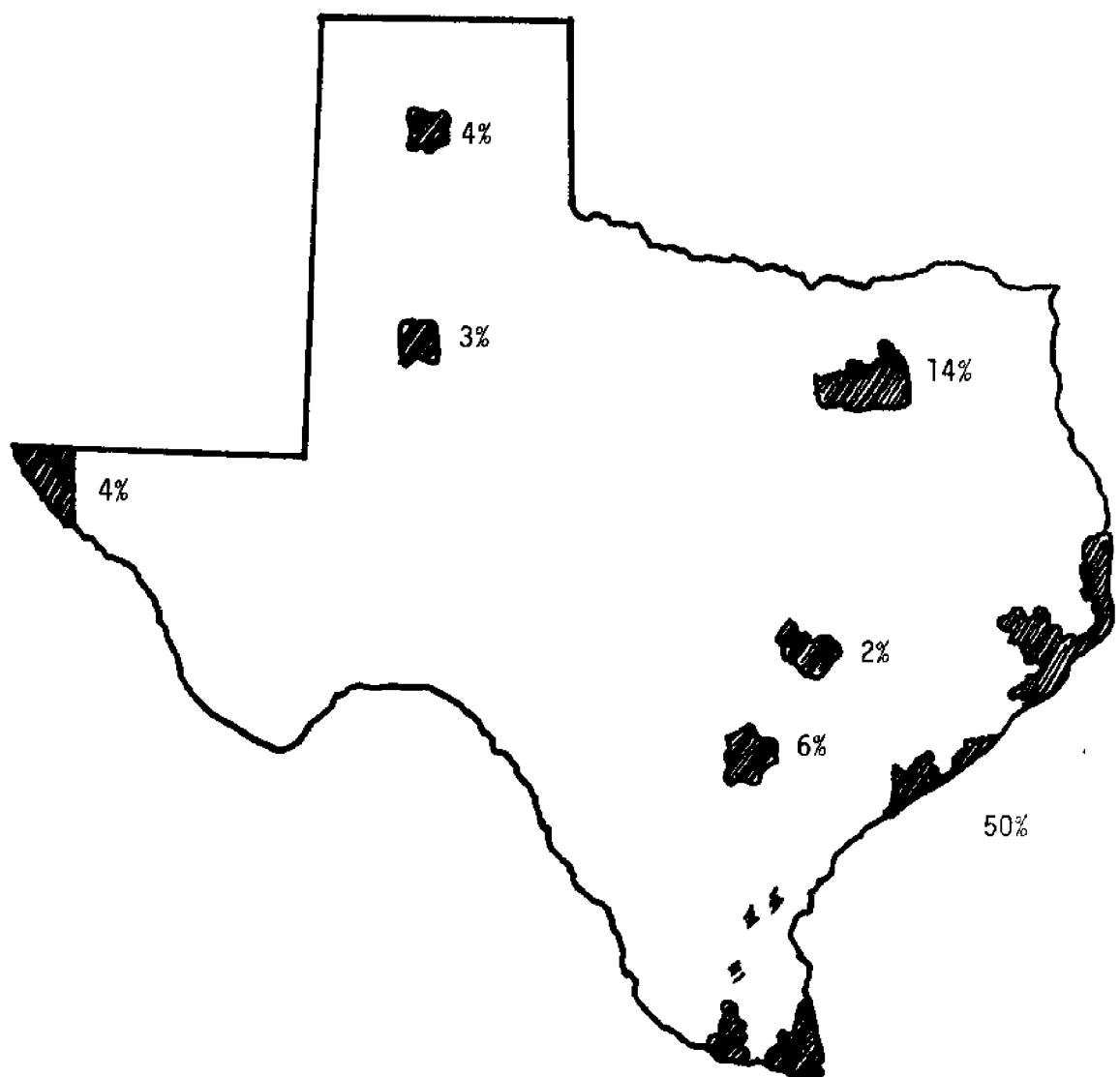
Sales to out-of-state customers generally are conveyed by air.

The inland wholesale institutions, like dealers, may sell finfish in whole, steaked, or filleted form, depending upon the type of institution within the channels to which it is distributed.

There are approximately two hundred and ten firms in the state of Texas possessing a license to sell fresh finfish at wholesale (including the dealers). From this total, seventy-one are dealers, twenty-five are wholesale truckers, and the rest are "ordinary" wholesalers. It should be noted, however, that simply possessing a wholesale license does not necessarily mean that the firm wholesales fresh saltwater finfish--the wholesaler may sell frozen finfish, or he may sell fresh-water finfish, shellfish and shrimp, or a combination of these items.

Figure 4-1 provides a map indicating the geographic distribution of the wholesale firms within the state of Texas. The importance to be noted from this map is that immediately beyond the coastal regions, the wholesale firms are concentrated in the larger metropolitan areas of Houston, San Antonio and Austin, and Dallas-Fort Worth. Relatively small concentrations are observed in the Lubbock, Amarillo, and El Paso areas. There are very few wholesale firms to be found outside these areas that merchandise fresh saltwater finfish. The entire coastal region (including the metropolitan Houston area) harbors roughly 50% of the total number of Texas firms

FIGURE 4-1  
CONCENTRATION OF WHOLESALE FIRMS POSSESSING  
A LICENSE TO MERCHANDISE SEAFOODS



possessing a wholesale license to sell fresh finfish. The San Antonio-Austin area accounts for another 8%, and the Dallas-Fort Worth area accounts for 14%. These figures reveal that roughly 72% of the wholesale firms merchandising fresh finfish are located along the Texas Gulf coast, and in the San Antonio-Austin and Dallas-Fort Worth areas.

It should again be recognized that the mere fact that a firm possesses a license to wholesale fresh finfish by no means suggests that the firm offers fresh saltwater finfish to its customers. In reality, the inland wholesalers handle a very insignificant amount of fresh saltwater finfish relative to the total quantity sold in Texas, except for those found in the Dallas-Fort Worth and San Antonio-Austin areas.

#### Other Institutional Components

The remaining institutional components of the marketing channels for fresh finfish are the independent grocers and specialty fish houses, the supermarket chains, and mass feeding outlets (restaurants, schools, hospitals, etc.). It is difficult to make an analysis of these institutions, since there exists no data concerning the number, distribution, and importance of these kinds of institutions which offer fresh finfish to customers. One can only recognize that these institutions are components of the marketing channels, and play an active role in moving the finfish to ultimate consumers.

It is possible, however, to offer some generalizations about the importance of these kinds of institutions. The supermarket chains and restaurants appear to receive the greater portion of the quantities of finfish distributed by wholesale institutions. However, wholesalers contacted in the study reported that the supermarket chain stores have generally exhibited a tendency to move away from the merchandising of fresh finfish. Instead, they are offering finfish in pre-frozen and processed form, since no processing time is required in merchandising the pre-frozen finfish.

The restaurants were reported to be increasing in importance in terms of quantities of fresh finfish purchased from wholesalers. Many wholesalers have partially attributed this increasing tendency among the restaurants to the fact that the restaurants earn a higher gross margin and profit by offering fresh finfish relative to the profit that can be earned from offering beef steaks.

Although schools, hospitals, etc. purchase fresh finfish from the wholesale trade level, they do not handle significant amounts relative to the chain stores and restaurants. The independent grocers and small fish markets are the least important of the institutional components, as they are relatively few in number and do not have the operational capacity nor the clientele to handle large quantities of fresh finfish.

Street peddlers play a small role in the Texas fishing industry. The term "street peddler" refers to a person that purchases

finfish from harvesters or harvests the fish himself and sells to anyone or any firm that is willing to buy the merchandise. His customers may be ultimate consumers, restaurants, grocers, small fish markets, etc. Even though these street peddlers are relatively unimportant in relation to the total industry input, it should be recognized that they do exist.

Many individual "sport fishermen" possess a commercial fishing license, and occasionally make small individual contributions to the industry input. The commercial fishing license is only slightly higher in cost than a "sport" fishing license, and many fishermen choose to purchase the commercial license so they may legally sell finfish when they are able to make a large catch. It was estimated that roughly 25,000 commercial licenses were sold last year, and a significant portion of these were purchased by sports fishermen.<sup>1</sup>

Finally, it should be noted that the price of fresh finfish increases as it passes through the various trade levels and institutional components. The value added to the price paid for the finfish at any given trade level or firm is a function of the number of marketing functions performed, the extent to which these functions are performed, and the "quality" of the functions performed. For example, the value added to the price paid to harvesters

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<sup>1</sup>Bill Schwartz, Seafood Marketing Specialist, Texas Parks and Wildlife Department.

at the coastal dealer trade level might depend upon how many marketing functions he performs for successive trade levels in the channels. To illustrate, the coastal dealer might provide the following functions:

Function 1. Removing scales, gills and viscera, steaking filleting, etc.

Function 2. Storage of finfish (refrigerated or frozen).

Function 3. Sorting the finfish according to various sizes.

Function 4. Transporting finfish to customers.

The value added to the dealer's purchase price of the finfish increases as each of these marketing functions are performed. The price paid for finfish by a customer to a dealer who has performed only Function 1 will be less than the amount paid to the dealer if he has performed any of the other functions in addition to Function 1.

Additionally, the value added to the finfish will be greater as the extent to which each function is performed increases. For example, the value added to the finfish increases according to the extent to which Function 1 is carried out. The value added to finfish that has been steaked or filleted will be greater than the value added to finfish from which only the scales, gills and viscera have been removed.

Finally, the value added increases according to the "quality" of the functions performed -- i.e., how well the functions were performed. A dealer that has a reputation for providing better

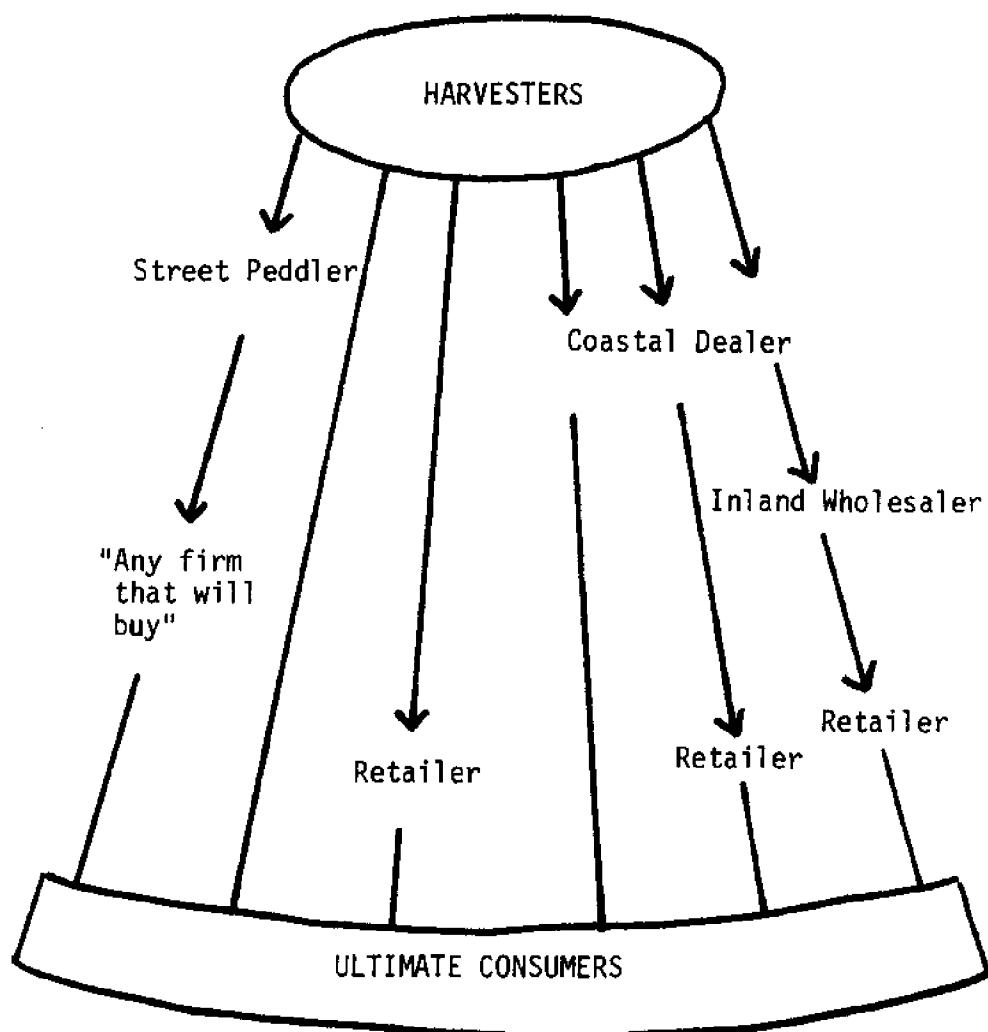
care for the finfish may charge a higher price for the merchandise than a dealer who processes poorly, pays little attention to proper refrigeration and storage, or in some other way diminishes the freshness or quality of the finfish.

#### The Distribution Channels

Various combinations of the institutional components have evolved over the years to form the channel network or structure utilized by the Texas fishing industry in moving the fresh finfish to ultimate consumers. Figure 4-2 provides a model of the channel structure of the Texas fishing industry illustrating the marketing channels that have developed.

Utilizing the conceptual framework developed in Chapter II, various channels have evolved because of certain functions and services which must be performed in moving the fresh finfish from the sea to ultimate consumers. These functions and services consist of transportation and storage, buying and selling, and transfer of title as well as changing the form of the product through processing of the fresh finfish. Because there is a cost attached to these functions -- which is dependent upon the number of functions performed, the extent to which each is performed, and the quality with which each function is performed -- various trade channels have evolved depending upon: (1) the efficiency with which the functions can be performed at various trade levels within the

FIGURE 4-2  
DISTRIBUTION CHANNELS FOR FRESH FINFISH  
UTILIZED BY THE TEXAS FISHING INDUSTRY



channels, and (2) the kinds and nature of the services and functions demanded by the ultimate consumers of fresh finfish.

Listed from most to least complex, the channels utilized by the Texas fishing industry are:

Channel 1. Harvester - Dealer - Wholesaler - Retailer - Ultimate Consumer.

Channel 2. Harvester - Dealer - Retailer - Ultimate Consumer.

Channel 3. Harvester - Dealer - Ultimate Consumer.

Channel 4. Harvester - Retailer - Ultimate Consumer.

Channel 5. Harvester - Ultimate Consumer.

Another "incidental" channel which is observed within the industry is:

Channel 6. Harvester - "Street Peddler" - "Any Firm or Ultimate Consumer That Will Buy."

There is no need to discuss each of the above diagrammatical channels, as they are self-explanatory and their purpose is simply to suggest the various institutional component combinations that are possible within the industry by which finfish distribution to ultimate consumers is accomplished. Further analysis is given the channels in Chapter V of this report.

#### Vertical Integration

Vertical integration within the Texas fishing industry is typically observed in the areas of harvester-dealer and wholesaler-retailer arrangements. In some cases a dealer will own and operate

several fishing boats, although in most cases the dealer must rely upon many other sources of supply other than his own boats to provide a sufficient supply of finfish. The other type of vertical integration arrangement common to the industry is observed among the wholesaler and retailer trade levels. In this case, retail and wholesale operations are typically conducted "under the same roof," or within the same place of business. But it is possible, of course, for physically separated wholesale and retail establishments to be jointly owned.

Finally, it is possible to observe vertical integration among the harvesting, wholesale, and retail trade levels, but this type of arrangement is not common within the industry. When it does exist, the arrangement usually consists of a dealer firm that owns and operates fishing boats, and operates a retail counter in addition to performing wholesale functions.

#### Zoning Laws Affecting the Texas Fishing Industry

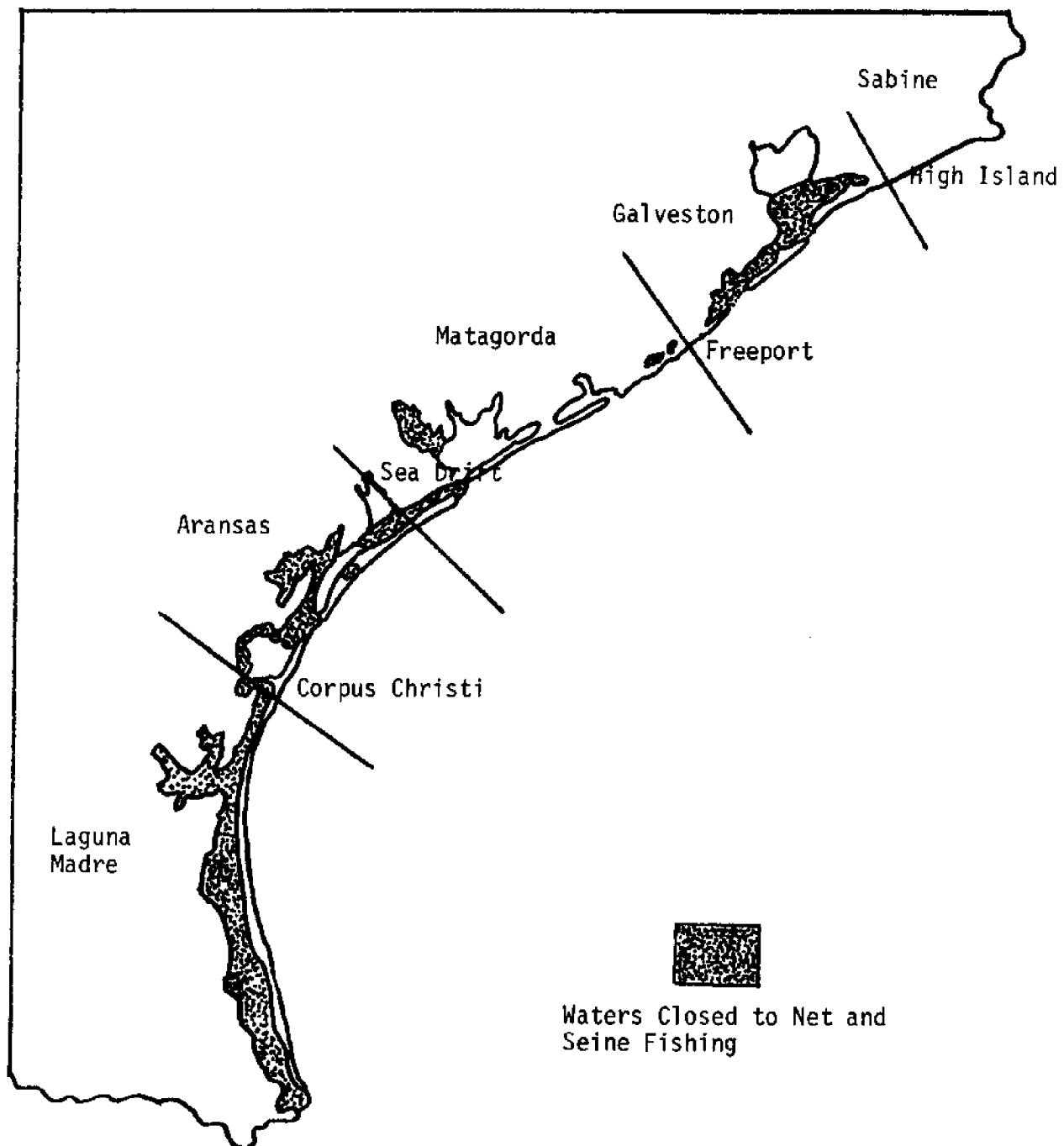
There are state zoning laws applicable to the Texas fishing industry which merit brief consideration. These laws bear upon the waters and bays in which it is legal to harvest finfish species with a seine or net. Quoting from the Full Text of Parks and Wildlife Laws of Texas, the law reads that it is "unlawful for any person at any time to place, set, or drag any seine or net...into the waters hereinafter referred to...or to use any other device or method for taking fish, other than the ordinary pole and line or cast net or

minnow seine of not more than twenty feet in length for catching bait."

The map in Figure 4-3 indicates that the preponderance of the coastal waters and bays are closed to commercial net and seine fishing. It is reported by participants in the industry that these zoning laws have serious implications to the Texas fishing industry in that the harvesters are restricted to use of the hook and line as the sole legal means of taking finfish species. It is also said that partly as a result of these laws, fewer and fewer persons are willing to put forth the effort required to harvest fish in such a manner as the monetary rewards to be gained are small relative to the income that can be earned at other jobs. In addition, since commercial fishermen in the State of Texas are restricted to the use of hook and line as opposed to net and seine in harvesting their catch, it is almost impossible to land enough fish to satisfy the demand for fresh finfish. Consequently, there has been a tendency toward growing dependence upon finfish imports from Mexico.

The primary reason for closing the bays to commercial net fishing is attributed to Texas sport fishermen actively defending the belief that allowing the use of seines and nets will have a detrimental effect upon the game fish populations and, consequently, the quality of coastal sport and recreation fishing. However, it was pointed out by many persons in the institutions investigated during this study that the use of nets and seines has actually been shown

FIGURE 4-3

COASTAL WATERS AND BAYS CLOSED  
TO COMMERCIAL NET AND SEINE FISHING

to be beneficial to the repropagation of gamefish species. Because the use of nets and seines allows better control of trash and predatory species, there is a greater probability of the perpetuation of the desirable gamefish species.

According to a source within the Texas Parks and Wildlife Department, during the last thirty or forty years there has been observed a trend of gradual closure of the bays. Those sections of water remaining open to net fishing--concentrated primarily in the central areas of the Texas coast--are kept open probably because the areas have no great value for recreational activities, or there has been a strong defense upheld by the local fishermen in the areas.<sup>2</sup>

The importance to be derived from this brief consideration of the zoning laws is that the greater portion of the waters and bays on the Texas Gulf coast are closed to commercial net fishing, placing limitations upon the waters available for this purpose. Consequently, it has been reported that it is almost impossible to satisfy the Texas demand for finfish without relying upon imports from Mexico, since Texas harvesters are restricted to the "less efficient" hook and line method.

#### Summary

In this chapter, the institutional components of the trade channels were discussed in terms of their functions and roles

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<sup>2</sup>Terrance Leary, Coastal Fisheries Coordinator, Texas Parks and Wildlife Department.

within the structure of the Texas fishing industry. Special consideration was given the dealer trade level, as it is typically this trade level at which the finfish are accumulated before being dispersed to other institutions within the industry. Knowledge of this trade level provides a basic understanding of the geographic concentration of landing of finfish by the harvester along the Texas Gulf coast. The preponderance of the total tonnage of finfish associated with the industry is concentrated among eighteen of the seventy-one dealer firms in Texas. Also, the majority of the total number of wholesale firms in Texas possessing a license to merchandise seafoods is concentrated along the Gulf coast and in the Dallas-Fort Worth, San Antonio-Austin, and Houston metropolitan areas. The other institutional components of the channels are the independent grocers and specialty fish markets, the supermarket chain stores, and the mass feeding outlets (restaurants, schools, hospitals, etc.). The various combinations of these institutions which form the different channels were described ranging from the most complex channel involving all the trade levels, to the simplest channel consisting of only the producers and consumers.

In the second section of this chapter, the zoning laws and limitations which affect the Texas fishing industry were briefly discussed. It was noted that the greater portion of the coastal waters and bays are closed to commercial net and seine fishing, restricting the fishermen to use of the hook and line as the sole legal means for harvesting their catch. Consequently, it is difficult

for the existing number of Texas commercial fishermen to land sufficient quantities to satisfy the demand for finfish. This phenomenon in which the domestic demand far exceeds the domestic supply results in quantities of finfish being imported from Mexico to aid in satisfying the demand.

## CHAPTER V

### ANALYSIS OF THE CHANNELS OF DISTRIBUTION UTILIZED IN THE MARKETING OF FRESH FINFISH

This chapter, divided into two major sections, provides information and data pertaining to the marketing channels identified and observed during the study. Section one discusses the channels of distribution utilized by: (1) the coastal dealer trade level, and (2) the inland wholesaler trade level. In addition, an analysis is made of the allocation of fresh finfish at the retailer trade level.

Section two presents an analysis of the geographic distribution of fresh finfish at the coastal dealer trade level and the inland wholesaler trade level. These two trade levels are analyzed in terms of the distribution of fresh finfish:

1. Within fifty miles of the wholesalers place of business and still within the state of Texas.
2. Between fifty and one hundred miles from the wholesaler's place of business and still within the state of Texas.
3. Over one hundred miles from the wholesaler's place of business and still within the state of Texas.
4. Outside the state of Texas.

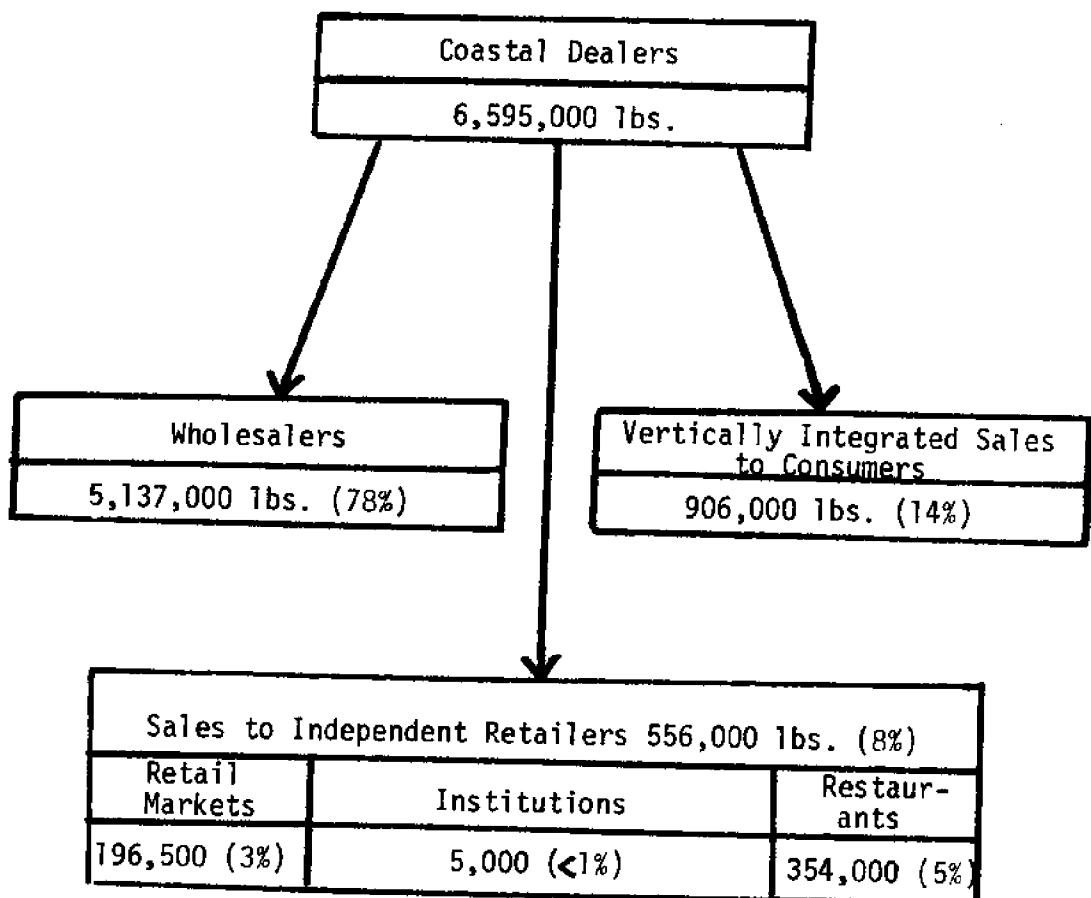
Finally, an analysis is made of the concentration of the distribution of fresh finfish in coastal zones and inland metropolitan areas.

Data on the total tonnage of finfish were derived from estimates made by the coastal dealers of the total amount of fresh finfish purchased from harvesters during 1970. Table 5-1 compares the total quantities of fresh finfish accounted for in the study to the total quantities of fresh finfish that were landed in Texas and imported from Mexico during 1970. Approximately 70% of 1970 Texas landings and 95% of Mexican imports were accounted for in the information provided by the fifteen coastal dealers investigated. In terms of the total Texas supply of fresh finfish (Texas landings plus Mexican imports), 81% were accounted for.

#### Marketing Channels Used by the Coastal Dealers

Figure 5-1 indicates that three different channels were employed to distribute the 6,595,000 pounds of fresh finfish reported by the fifteen coastal dealers. More than three-quarters of the 6,595,000 pounds of fresh finfish (78%) passed through the wholesale and retail levels before reaching the ultimate consumers. Eight percent of the "dealer tonnage" by-passed the wholesale trade level and was distributed to the retail trade level. The retail trade level is composed of three types of institutional components: (1) independent retail markets (such as supermarket chain stores, independent grocers, independent specialty fish markets), (2) institutions (such as schools and hospitals), and (3) restaurants, clubs, etc. Fourteen percent of the coastal dealer tonnage by-passed both the wholesale and retail trade levels, and was sold directly to ultimate consumers over the

FIGURE 5-1  
DISTRIBUTION CHANNELS UTILIZED BY COASTAL DEALERS



retail counters within the dealer's places of business. From these findings it is clear that the greater portion of the total quantity of fresh finfish passes through the "dealer", wholesale, and retail levels before reaching the final consumer.

It is also interesting to note that the relative importance of the three different marketing channels varies among coastal wholesalers within the five coastal fishing districts (see Table 5-1). Four percent of the total tonnage of finfish accounted for in the Galveston district was distributed to wholesalers, while 17% was distributed to retailers, and the remaining 79% directly to ultimate consumers.

A reason attributed to the preponderance of fresh finfish sold directly to ultimate consumers by coastal dealers in the Galveston district is that the demand for fresh finfish is greater than the supply. The coastal wholesalers in this district are able to sell most (79%) of their fresh finfish through their own vertically integrated retail markets directly to ultimate consumers. The majority of independent retailers to which fresh finfish were distributed from dealers in the Galveston district were located in the city of Galveston, Texas. It was noted that some fresh finfish was distributed by wholesalers in Houston to the Galveston retailers. These findings tend to support the proposition that the demand exceeds the supply to the extent that additional quantities must be brought in from other areas in order to satisfy local demand. In the Matagorda

TABLE 5-1

Marketings of Fresh Finfish Accounted for in the Study,  
Compared to Texas Landings and Mexican Imports

Fishing District	Tonnage Accounted for in the Study								
	Texas Landings	Mexican Imports	Total Supply	Texas Landings	% Of T.L.	Mexican Imports	% Of M.I.	Total	%
Sabine	150,000	---	150,000	130,000	87%	---	---	130,000	
Galveston*	567,000	---	567,000	740,000*	130%	---	---	740,000	
Matagorda	502,000	---	502,000	325,000	65%	---	---	325,000	
Aransas	1,044,000	---	1,044,000	1,015,000	97%	---	---	1,015,000	
Laguna	2,690,000	4,204,000	6,894,000	1,230,000	46%	4,000,000	95%	5,230,000	
<b>TOTAL</b>	<b>4,953,000</b>	<b>4,204,000</b>	<b>9,157,000</b>	<b>3,440,000</b>	<b>70%</b>	<b>4,000,000</b>	<b>95%</b>	<b>7,440,000</b>	<b>81%</b>

\* The wholesalers investigated in this district during the study reported greater tonnages than were reported in Texas Landings in 1970.

district, only 25% of the district landings were distributed to wholesalers, while 74% went to the retailers. Only 1% of the finfish reported in the Matagorda district was sold directly to ultimate consumers. In the two southern-most districts, Aransas and Laguna Madre, virtually all finfish accounted for were distributed to the wholesale trade level. The Aransas district reported 92% of district tonnage sold to the wholesale trade level, and the Laguna Madre district reported 99%.

A reason for the preponderance of fresh finfish in the Aransas and Laguna Madre districts distributed to wholesalers is that the supply of fresh finfish in these two districts far exceeds the demand. It was learned that a large portion of finfish from these two districts was distributed to and consumed within the larger inland metropolitan areas of Houston, Dallas, and San Antonio. Therefore, it was necessary to distribute the fresh finfish from the Aransas and Laguna Madre districts to wholesalers within these inland metropolitan areas which could efficiently supply the demand for fresh finfish within these markets. Thus, the differences in kinds of distribution channels utilized by coastal dealers in different fishing districts might be at least partially explained by the relationships of the supply of finfish and the demand for finfish in the various districts.

#### Vertical Integration Within the Coastal Dealer Trade Level

Since the dealers are wholesalers, by definition, vertical integration at this trade level occurs "forwardly". That is, the dealer

TABLE 5-2  
 Relative Importance of Distribution Channels  
 Among the Coastal Fishing Districts

District	Tonnage	Tonnage To Wholesalers	%	Tonnage To Retailers	%	Direct Sales	%
Sabine	130,000	78,000	60	52,000	40		
Galveston	1,065,000	46,000	4	181,000	17	838,000	79
Matagorda	325,000	80,000	25	241,000	74	4,000	1
Aransas	1,075,000*	985,000	92	46,000	4	44,000	4
Laguna	4,000,000*	3,948,000	99	32,000	<1	20,000	<1
TOTAL	6,595,000	5,137,000	78%	552,000	8	906,000	14

\*includes Mexican imports

may integrate retailing functions into his wholesale operations. In order to measure the importance of vertical integration at the dealer trade level, the quantities of finfish sold directly to consumers by the dealers may be added to the quantities distributed to the independent retail outlets. Stated another way, quantities of finfish distributed through Channels 2 and 3 in Figure 5-1 are combined to form total sales to the retail trade level. In reality, when a dealer sells fish directly to ultimate consumers, he first buys fish from the harvesters as a wholesaler, and then sells the finfish "to himself". In other words, the dealer sells fresh finfish to his own retailing outlet. A dealer's direct sales to consumers are a part of his sales to the retail trade level and will hereinafter be spoken of as "vertically integrated sales."

The finfish distributed from the dealer trade level flow through only two channels: (1) from dealers to the wholesale trade level, and (2) from dealers to the retail trade level. The retail trade level served by dealers is composed of independent retail markets, "vertically integrated markets," institutions and restaurants. Table 5-3 shows the tonnage distributed to these four types of markets within the retail trade level, and the respective relative shares of each type. It is noted that sales to vertically integrated markets are indeed significant among the coastal dealers, as these sales account for 62% of all sales to the retail trade level. This means, of course, that 38% of all sales to the retail trade level go to independent retail outlets.

TABLE 5-3

Retail Trade Level Served by Coastal Dealers and  
Relative Importance of Sales to Retail Markets, Institutions, Restaurants

RETAIL MARKETS						
District	Tonnage	Sales to				
		Vertically Integrated Sales	% Retail	% Institutions	% Restaurants	%
Sabine	52,000	0	26,000	50	26,000	50
Galveston	1,019,000	838,000	82	0	181,000	18
Matagorda	249,000	4,000	2	125,000	50	5,000
Aransas	90,000	44,000	49	34,000	38	12,000
Laguna Madre	52,000	20,000	38	12,000	24	20,000
Total Sales to Retail Trade Level	1,462,000	906,000	62	197,000	14	5,000
						354,000
						24

It is also seen in Table 5-3 that the importance of sales to vertically integrated retail markets varies among the five fishing districts. In the Sabine district, sales to vertically integrated markets were non-existent among the wholesalers investigated. By far the most important district in terms of vertically integrated sales was the Galveston district. In this district sales constituted 82% of the total sales to the retail trade level. Vertically integrated sales were insignificant in the Matagorda district, with a relative importance of only 2% of sales to retailers. In the Aransas and Laguna Madre districts, vertically integrated sales were significant with 49% and 38% respectively. It should be recognized, however, that even though vertically integrated sales in these two districts were fairly significant, sales to the retail trade level were unimportant relative to sales to the inland wholesaler trade level.

Still another manner in which vertical integration may be considered is in terms of the importance of vertically integrated sales relative to sales to the "retail markets". "Retail markets" are one of the three types of institutional components which form the retail trade level and sales to these retail markets may be in the form of sales to independent retail markets or to vertically integrated retail markets. In Table 5-4, vertically integrated sales are shown to be 81% of the total sales to retail markets at the coastal dealer trade level. In considering the dealer trade

TABLE 5-4

## Importance of Sales to Vertically Integrated Markets Relative to Sales to Retail Markets

Fishing District	Sales to Retail Markets				Total
	Independent	%	Vert. Integ.	%	
Sabine	26,000	100	-0-	0	26,000
Galveston	-0-	0	838,000	100	838,000
Matagorda	125,000	97	4,000	3	129,000
Aransas	34,000	44	44,000	36	78,000
Laguna Madre	12,000	37	20,000	63	32,000
Total Sales to Retail Markets	197,000	19	906,000	81	1,103,000

level as a whole, from these figures it might be concluded that sales to vertically integrated retail markets constitute a substantial portion of the total sales to the retail markets and to the entire retail trade level in general.

Again, it is interesting to learn how the importance of vertically integrated sales varies among the dealers within the five fishing districts. Table 5-4 indicates total sales of finfish to the retail markets for each of the districts and reveals the importance of vertically integrated sales relative to sales to retail markets.

Vertical integration, in the Galveston district, constituted 100% of sales to retail markets.

In the Aransas and Laguna Madre districts, it is seen that sales to vertically integrated markets respectively constituted 36% and 63% of sales to retail markets. It should be pointed out, again, that even though vertically integrated sales are fairly significant in these two districts, total sales to the retail trade level are unimportant relative to sales to the wholesale trade level.

With respect to the extent to which vertical integration is observed among the coastal dealers, in general, vertically integrated retail markets play a more important role in the marketing of fresh finfish to ultimate consumers than do independent retail markets (supermarkets, chain stores, specialty fish houses). For reasons unknown, the independent retailers do not market near the volume of fresh finfish as do the coastal wholesalers through their own

vertically integrated retail outlets. One might speculate however, that the independent retailers are not performing, or are not willing to perform, the marketing functions that are necessary to market and effectively stimulate the demand for fresh finfish. As a result, the coastal wholesalers must perform these marketing functions themselves in order to get the finfish to ultimate consumers.

#### Marketing Channels Used by the Inland Wholesalers

In Figure 5-1 it is shown that 78% or 5,139,000 pounds of the total tonnage of fresh finfish accounted for in the coastal dealer trade level distributed to the inland wholesalers. This section describes through what channels this quantity of finfish was distributed final consumers.

It should be mentioned that because inland wholesalers purchased from other coastal dealers that were not included in the study, the tonnage reported by the inland wholesalers was not exactly equal to 78% of the tonnage distributed by the dealer trade level. In addition, the tonnage reported by the two trade levels could not be expected to be equal in that many of the dealers and wholesalers simply offered estimates of the total tonnage rather than figures from business records. In many instances these type of data were not recorded by the responding firm. However, the total tonnage accounted for in the wholesaler trade level closely matched the total tonnage reportedly distributed by the coastal dealers. Inland wholesalers reported purchases of 5,515,000 pounds of fresh finfish as compared to the 5,139,000 pounds

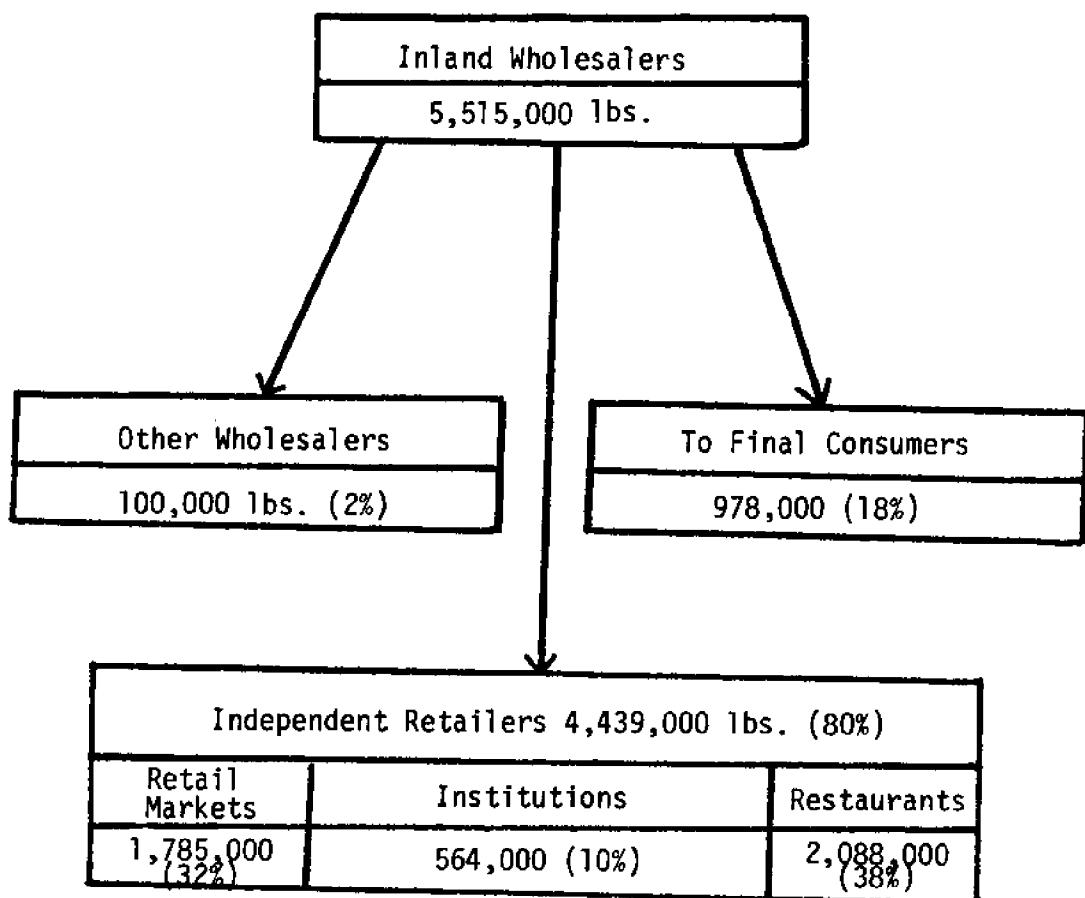
reported by the coastal dealers. The 376,000 pounds discrepancy can be attributed to estimation by the dealers and inland wholesalers, and to the "leakage", or quantities of fresh finfish not accounted for in the study.

Figure 5-2 indicates that the 5,515,000 pounds of fresh finfish reported by the inland wholesaler trade level were distributed in three different channels. Although the channels used by the inland wholesalers were basically the same as those used by the dealers, their relative importance was much different. Only 2% of the "inland wholesaler tonnage" was distributed to other wholesalers, as opposed to the 78% noted at the dealer trade level. In addition, it is important to note that this 2% was distributed to wholesale truckers, and not to wholesale "houses" or establishments. Of this tonnage sold to the wholesale truckers, 60% was distributed to other wholesale "houses", and 40% to retail markets within the retail trade level.

The greater portion of the inland wholesaler tonnage (82%) was distributed to independent retailers, while the remaining 18% was sold directly to final consumers; this 82% includes the 2% initially distributed to wholesalers, since the 2% was eventually distributed to the retail trade level. Of the quantities distributed to independent retailing firms, 32% of the total wholesaler tonnage was allocated to independent retail markets, 10% to institutions, and 38% to restaurants.

Keeping the overall channel structure (Figure 5-2) of the inland wholesaler trade level in mind, it is interesting to learn of the

FIGURE 5-2  
DISTRIBUTION CHANNELS UTILIZED BY INLAND WHOLESALERS



variations in relative importance of the three channels among different geographic regions within Texas. Table 5-5 indicates the relative importance of the three channels for each of the five major metropolitan areas in which inland wholesalers were investigated in the study.

It is quickly seen that Austin is the only city in which wholesalers reported sales to other wholesale firms. The tonnages sold to other wholesalers constituted only 2% (100,000 pounds) of the total, and were distributed to wholesale truckers that reportedly distributed the 100,000 pounds to wholesale markets in Austin and Dallas. Sales of fresh finfish to the retailer trade level were significant in all of the metropolitan areas. (See Table 5-5) Of these areas, sales to retailers were most significant in Houston, Dallas, and Corpus Christi, and least significant in Austin and San Antonio. Additionally, direct sales to consumers were significant only in the cities of Austin and San Antonio.

#### Vertical Integration

In considering the inland wholesaler trade level, it is interesting to learn of the significance of vertical integration between the wholesale and retail trade levels.

As done with coastal dealers, total sales of fresh finfish to the retail trade level can be determined by combining the quantity sold directly to consumers and the quantities sold to the independent retailers. Table 5-6 indicates the total sales to the retail trade

TABLE 5-5  
 Relative Importance of Channels  
 For Major Inland Metropolitan Areas

Metropolitan Areas	Total Tonnage	To Wholesalers	To Retailers	Direct Sales	
Houston	2,400,000	0	2,400,000	100	0
Dallas	1,020,000	0	992,000	28,000	3
Austin	895,000	100,000	12	365,000	40 430,000 48
San Antonio	1,020,000	0	500,000	49	520,000 51
Corpus Christi	180,000		180,000	100	
Total Tonnage to Wholesalers in Inland Metro- politan Areas	5,515,000	100,000	2	4,437,000	80 978,000 18

TABLE 5-6

Retail Trade Level Served by Inland Wholesalers  
And Relative Importance of Fresh Finfish Sales  
To Retail Markets, Institutions, and Restaurants

<u>Retail Markets</u>								
Metropolitan Area	Trade Level	Total Tonnage To Retail	Vertically Integrated Markets	Independent Retail Markets	Institutions	Restaurants		
		%	%	%	%	%		
Houston		2,400,000	0	1,020,000	420,000	960,000		
Dallas		1,020,000	28,000	3	180,000	18	90,000	9
Austin		795,000	430,000	54	148,000	19	0	217,000
San Antonio		1,020,000	520,000	52	325,000	32	50,000	4
Corpus Christi		180,000	0	112,000	62	4,000	2	64,000
<b>TOTAL</b>		<b>5,415,000*</b>	<b>978,000</b>	<b>18</b>	<b>1,785,000</b>	<b>32</b>	<b>564,000</b>	<b>10</b>
								40

\*This total differs from the total shown in Table 5-3 because the 100,000 lbs. distributed to other wholesalers is not included in the above total.

level and relative importance of four types of retail markets to which finfish were distributed. It is seen that of the sales to the entire retail trade level, sales to retail markets (including vertically integrated sales) constituted 50% of the total, while sales to institutions and restaurants constituted 10% and 40% respectively. Sales to independent retail markets constituted 32% of total sales to the retail trade level, while sales to vertically integrated retail markets constituted 18%.

The data indicate that sales of fresh finfish to independent retail markets are more significant relative to vertically integrated markets at the inland wholesale trade level than at the coastal dealer trade level. This phenomenon might be explained by the fact that there are far greater numbers of independent retailers handling fresh fish in inland areas that must be serviced than there are in coastal areas. In the coastal areas, however, the opposite was true. There it was shown that vertically integrated markets were relatively more important than the independent retailers.

The coastal dealers sell large volumes of fresh finfish through vertically integrated markets for two reasons. First, the coastal dealers have traditionally "taught" consumers that they can purchase fresh finfish at their place of business. The consumers go to the dealers' retailing outlets to purchase fresh finfish because they have learned that the dealers will accomodate them in their desire to purchase fresh finfish. Secondly, because the dealers have built

up a large clientele over the years, the opportunity for independent retailers to merchandise fresh finfish is reduced.

At the inland wholesaler trade level, sales of fresh finfish to independent retailers are more predominant than sales of fresh finfish through vertically integrated markets for a number of reasons. First, it should be recognized that in most cases, fresh finfish are not the inland wholesaler's "bread and butter" item. That is, sales of fresh finfish to retail customers relative to sales of other product lines are generally very small. Therefore, the vertically integrated inland wholesalers cannot afford to undercut the independent retailer's fresh finfish prices in an attempt to develop a larger ultimate consumer market share, since they run the risk of antagonizing the independent retailers upon which their livelihood depends. The inland wholesalers must maintain a sort of working relationship with their independent retail customers, and undercutting the retailers' fresh fish prices might result in angry customers, and consequently, decreased sales of all product lines to these retailers. These considerations partially justify the smaller sales of fresh finfish through vertically integrated retail markets relative to sales of fresh finfish to independent retailers at the inland wholesale trade level.

Even though sales to independent retailers are more significant than vertically integrated sales among inland wholesalers, it is important to recognize that these vertically integrated sales of fresh finfish are quite substantial in relation to sales to the entire trade level. Table 5-6 lends support to this observation, showing

vertically integrated sales of fresh finfish to be almost 20% of sales to the entire retail trade level.

From these considerations, it might be concluded that the inland independent retailers (as well as the coastal independent retailers) are not participating in the marketing of fresh finfish to the extent that they could, in relation to the other types of retailers. This conclusion is further supported by the fact that inland restaurants account for a large share (40%) of the fresh finfish distributed to the entire retail trade level (see Table 5-6), suggesting that ultimate consumers patronize the restaurants as the primary alternative in satisfying their desire for fresh finfish.

Also shown in Table 5-6 are the major metropolitan areas investigated during the study and the relative importance of the four types of retailers to which finfish were sold. Vertical integration between the wholesale and retail trade levels was non-existent in the Houston and Corpus Christi metropolitan areas and was relatively insignificant in the Dallas area.

Another meaningful manner in which vertical integration may be considered is in terms of the importance of sales to vertically integrated markets relative to sales to the retail markets (vertically integrated retail markets and independent retail markets). Table 5-7 shows that the sales to vertically integrated retail markets constituted 35% of the sales to the retail markets. These findings lend support to the fact that there was generally a greater proportion of fresh finfish distributed to independent retail markets than was sold

TABLE 5-7

Importance of Vertically Integrated Retail Markets  
Relative to Sales to Total Retail Markets

Metropolitan Area	SALES TO RETAIL MARKETS						Total Sales to Retail Markets %
	Sales to The Retail Trade Level	Independent	%	Vertically Integrated	%		
Houston	2,400,000	1,020,000	100	0	0		1,020,000 100
Dallas	1,020,000	180,000	87	28,000	13	208,000	100
Austin	795,000	148,000	26	430,000	74	578,000	100
San Antonio	1,020,000	325,000		520,000		845,000	100
Corpus Christi	180,000	112,000	100	0	0	112,000	100
<b>Total</b>	<b>5,415,000</b>	<b>1,785,000</b>	<b>65</b>	<b>978,000</b>	<b>35</b>	<b>2,763,000</b>	<b>100</b>

within vertically integrated inland wholesale establishments.

In considering the importance of sales to vertically integrated markets in terms of the metropolitan areas, again it is noticed that the most important areas were Austin and San Antonio. That is, inland wholesalers in these cities operated one or more retail stores and these stores accounted for a large share of the total retail sales in that metropolitan area.

#### Marketing of Fresh Finfish Within the Retailer Trade Level

In this section, quantities of fresh finfish distributed by the coastal dealer trade level and the inland wholesaler trade level to retailers are combined to determine the total quantity of fresh finfish distributed to the retailer trade level. The tonnage of fresh finfish associated with the four types of retailers within the retailer trade level may be compared in order to understand the relative importance of these retailers in moving the finfish to ultimate consumers in Texas. Table 5-8 shows that the total tonnage of fresh finfish distributed to the retailer trade level by both the coastal dealer and inland wholesaler trade levels was 6,877,000 pounds. Sales to retailers were far more important within the inland wholesale trade level than within the coastal dealer trade level. Table 5-9 indicates that the coastal dealers distributed 1,462,000 pounds or 21% of the 6,877,000 pounds to retailers, while the inland wholesalers distributed 5,415,000 pounds or 79% to retailers.

TABLE 5-8

## Tonnage Allocation of Fresh Finfish Within the Retailer Trade Level

Source	Total Tonnage To Retailer Trade Level	Retail Markets			Retail Markets					
		Vertically Integrated Sales	%	Retail Markets	Sales Independent Sales	%	Institutions	%	Restaurants	%
Coastal Dealers	1,462,000	100	906,000	62	197,000	14	5,000	354,000	24	
Inland Wholesalers	5,415,000	100	978,000	18	1,785,000	33	564,000	10	2,088,000	39
Total Tonnage to Retailers	6,877,000	100	1,884,000	27	1,982,000	29	569,000	8	2,442,000	36

Relative Shares of Total Retail Trade Level for the Coastal Dealers and Inland Wholesalers

Source	Retail Markets					
	Total Tonnage To Retailer Trade Level	% Vertically Integrated Sales	% Independent Sales	% Retail Markets	% Institutions	% Restaurants
Coastal Dealers	1,462,000	26	906,000	48	197,000	10
Inland Wholesalers	5,415,000	79	978,000	52	1,785,000	90
Total Tonnage To Retailer Trade Level	6,877,000	100	1,884,000	100	1,982,000	100
					569,000	100
					2,442,000	100

Table 5-8 indicates that of the total tonnage of fresh finfish distributed to retailers, 1,884,000 pounds or 27% was sold directly to ultimate consumers in vertically integrated retail markets, while 1,982,000 pounds or 29% was sold to ultimate consumers in independent retail markets. Eight percent of the total retailer tonnage, or 569,000 pounds was consumed at institutions (schools, hospitals, etc.), while the remaining 36% or 2,442,000 pounds were consumed at restaurants.

Thus, one can see that among the four types of retailers that offer fresh finfish to ultimate consumers, the most important are restaurants, with 36% of the retailer tonnage. Second are the independent retail markets, with a share of 29%. These figures might lend support to the statement pointed out in Chapter III in which wholesalers were reported to have noticed decreasing importance among the supermarket chain stores, and increasing importance among restaurants in the quantity of fresh finfish purchased.

Table 5-8 also indicates that sales of fresh finfish to ultimate consumers in vertically integrated retail markets are significant. Vertically integrated sales constituted 27% of the volume of finfish sold at the retailer trade level.

Table 5-9 compares the contributions of fresh finfish by the coastal dealer and inland wholesaler trade levels to each of the four types of retailers to which finfish are distributed. Relative to the inland wholesalers, the coastal dealers contributed smaller

quantities of fresh finfish to all four types of retailers. This is to be expected, however, since 78% of the tonnage of fresh finfish distributed by coastal dealers went to the inland wholesalers, who in turn distributed to retailers.

It is important to note that more fresh finfish were purchased by ultimate consumers at restaurants than at independent retail markets (supermarkets, chain stores, specialty fish houses, etc.). This generalization holds true for both the coastal zones and inland areas (see Table 5-8). However, greater total quantities of fresh finfish were purchased from all types of retailers within the inland trade level than were purchased from coastal retailers. It is intriguing that quantities of fresh finfish consumed at inland restaurants were six times greater than quantities consumed at coastal restaurants, since it seems logical to assume that coastal restaurants would serve more fresh finfish than would inland restaurants. This phenomenon, however, may be a result of more than a first-pass answer that inland restaurants are doing a better marketing job than their coastal counterparts. It is probable that the coastal restaurants purchase a great deal of finfish from harvesters, and consequently would not be reflected in the data collected from wholesalers.

These data seem to suggest that independent retail markets are doing a relatively poor job in merchandising and marketing fresh finfish. This statement is supported by the fact that, generally, Texas fresh finfish wholesalers are "carrying half the load" in marketing fresh finfish through retail markets. That is, of the total volume

of fresh finfish marketed through retail markets, 27% is sold by wholesalers through vertically integrated retail markets, as opposed to 29% sold through independent retail markets. For these reasons it seems that the consumer is not being served adequately by independent retail markets and must often turn to the restaurant to satisfy his demands for fresh finfish.

#### Geographic Distribution of Fresh Finfish

The Coastal Dealer Level. Table 5-10 indicates that on the average the distribution of fresh finfish from the coastal dealer trade level was geographically allocated as follows:

Area I: 26% was distributed within a fifty-mile radius of the dealer's place of business, and still within the state of Texas.

Area II: an insignificant volume of fresh finfish (less than 1%) was distributed between fifty and one hundred miles from the dealer's place of business and still within Texas.

Area III: 59% was distributed over one-hundred miles away from the dealers' place of business, yet still within the state of Texas.

Area IV: 15% was distributed outside the state of Texas.

Of the 130,000 pounds of fresh finfish accounted for in the Sabine district, 90% stayed within fifty miles of the wholesalers' place of business, while the remaining 10% was distributed between fifty and one hundred miles. One hundred percent of the Sabine district tonnage of fresh finfish stayed inside the state of Texas.

TABLE 5-10

## Geographic Distribution of Fresh Finfish

Source	Tonnage	Tonnage To Area I	%	Tonnage To Area II	%	Tonnage To Area III	%	Tonnage To Area IV	%
<u>I. Coastal Dealers</u>									
Sabine	130,000	117,000	90	13,000	10				
Galveston	1,070,000	1,054,000	99	11,000	1				
Matagorda	325,000	219,000	67	5,000	2	101,000	31		5,000
Aransas	1,075,000	344,000	32			731,000	68		
Laguna Madre	4,420,000	84,000	2			3,299,000	75	1,037,000	23
TOTAL Coastal Dealer						4,131,000	59	1,042,000	15
Tonnage	7,020,000	1,818,000	26	29,000					
<u>II. Inland Wholesalers</u>									
Houston	2,400,000	2,352,000	98	48,000	2				
Dallas	1,020,000	390,000	38						
Austin	895,000	788,000	88	62,000	7	45,000	5		630,000
San Antonio	1,020,000	1,010,000	99	10,000	1				62
Corpus Christi	180,000	164,000	90	1,800	1	14,200	9		
TOTAL Inland Wholesaler Tonnage	5,515,000	4,704,000	85	121,800	2	59,200	1	630,000	12

In the Galveston and Matagorda districts, the preponderance of fresh finfish was distributed within fifty miles of the dealer's place of business. In the Galveston district, 99% stayed within fifty miles and only 1% was distributed between fifty and one hundred miles. An insignificant amount was distributed outside the state of Texas. Sixty-seven percent of the finfish reported in the Matagorda district remained within fifty miles of the dealer's place of business, while a substantial 31% was distributed over one hundred miles. Of the 1,075,000 lbs. of fresh finfish reported in the Aransas district, 32% remained within fifty miles of the dealer's place of business, while the remaining 68% was distributed over one hundred miles.

Finally, in the Laguna Madre district, only 2% of the reported 4,420,000 pounds of fresh finfish remained within fifty miles of the dealer's place of business, while 75% was distributed over one hundred miles, and 23% was distributed outside the state of Texas.

It is interesting to note that of the 1,042,000 pounds of fresh finfish shipped outside the state of Texas, 1,037,000 pounds originated in the Laguna Madre district. The other 5,000 pounds shipped out-of-state originated in the Galveston district. In addition, since 68% of the fresh finfish reported in the Aransas district and 75% reported in the Laguna Madre district were distributed over one hundred miles away, it can be presumed that the dealer located in these two districts provide the preponderance of the fresh finfish marketed in the metropolitan areas of Houston, Dallas, San Antonio and Austin.

The Inland Wholesaler Trade Level. Table 5-10 also shows that, on the average, the distribution of fresh finfish from the inland wholesaler was geographically allocated as follows:

Area I: 85% remained within fifty miles of the wholesalers' places of business.

Area II: 2% was distributed between fifty and one-hundred miles and still within the state of Texas.

Area III: 1% was distributed over one hundred miles, and still within the state of Texas.

Area IV: 12% was distributed outside the state of Texas.

In considering each of the major metropolitan areas, it is noticed that virtually all of the fresh finfish is distributed within a fifty mile radius of all the areas except for the Dallas area. Thirty-eight percent of the fresh finfish marketed in the Dallas area remains within fifty miles of the area, while the remaining 62% is marketed out-of-state. Ninety-eight percent of the fresh finfish marketed in Houston, 88% in Austin, and 99% in San Antonio are distributed within a fifty mile radius.. Ninety percent of the fresh finfish marketed in Corpus Christi remains within a fifty mile radius, while 1% is distributed between fifty and one hundred miles, and 9% is distributed over one-hundred miles.

Concentration of Distribution of Fresh Finfish Within the State of Texas

By combining the total tonnage of fresh finfish distributed within a fifty mile radius for all the coastal dealers investigated

in the study, it was possible to determine an approximation of the volume of fresh finfish consumed along the entire coastal region. The tonnage of fresh finfish consumed in the Houston metropolitan area was then added to the tonnage of fresh fish consumed in the coastal regions, since Houston is considered a "coastal region" in this analysis.

The tonnage of fresh fish consumed within fifty miles of the metropolitan areas of San Antonio, Austin, and Dallas were then determined and added to the total quantity of fresh finfish consumed along the Texas Gulf Coast. Using this aggregate total tonnage of fresh finfish as a base, relative shares of fresh finfish consumption were determined for: (1) the entire coastal region, (2) the Austin metropolitan area, (3) the San Antonio metropolitan area, and (4) the Dallas metropolitan area. The resulting shares provide an understanding of the concentration of fresh finfish consumption within the state of Texas.

Figure 5-3 indicates that roughly 66% of the total tonnage of fresh finfish was consumed along the entire Texas Gulf coast (including the Houston metropolitan area), while 15% was consumed in the San Antonio area, 12% in the Austin area, and 7% in the Dallas area.

#### Conclusions

In Chapter I, two hypotheses were stated. These were: (1) although there are many channels of distribution within the state

FIGURE 5-3  
TONNAGE CONCENTRATION OF FRESH FINFISH DISTRIBUTION IN THE STATE OF TEXAS



of Texas fishing industry, there exists one prominent channel which is used more frequently than the rest of the alternative channels; (2) the great majority of fresh finfish originating in the Texas Gulf coast region is distributed and consumed within the boundaries of the state of Texas.

Upon analyzing the data and information provided by the twenty-seven fresh finfish wholesalers investigated, both the above hypotheses were verified. With respect to the first hypothesis, it was shown that 78% of the fresh finfish accounted for in the study were distributed in the following channel: Harvester — coastal dealer — inland wholesaler — retailer — ultimate consumer. Thus, based upon the data presented in this study, the first hypothesis must be accepted as true.

The second hypothesis is accepted for it was shown in this chapter that only 15% of the tonnage of fresh finfish reported by the coastal dealers are shipped out of state. In all probability this 15% is much larger than the actual percentage of fresh finfish shipped out-of-state. It is almost certain that very little (if any) of the fresh finfish not accounted for in the study is shipped out-of-state, since (1) the wholesalers contacted were the largest in the state, and (2) the remaining smaller wholesalers not contacted normally limit the distribution of their fresh finfish within Texas.

In addition to these stated hypotheses, other channel structure activities were observed. With respect to the coastal dealer

trade level, it was shown that the preponderance (78%) of the fresh finfish accounted for were distributed to the inland wholesale trade level and the retail trade level before reaching ultimate consumers. Thus, this combination of trade levels constituted the predominant marketing channel for fresh finfish taken from the coastal waters of Texas and imported into Texas from Mexico. Other major distribution channels utilized by the coastal dealer trade level were: (1) Harvester → dealer → ultimate consumer, through which 14% of the dealer tonnage reached ultimate consumers, and (2) Harvester → dealer → independent retailer → ultimate consumer, through which the remaining 8% of the dealer tonnage reached ultimate consumers.

Differences in the relative importance of these three major channels were noted within the five coastal fishing districts. These variations in the kinds of distribution channels utilized in the different fishing districts can be partially explained by the relationship of the supply of and demand for fresh finfish within the district. For example, it was noted that in the Galveston district 79% of the fresh finfish accounted for was sold directly to ultimate consumers through vertically integrated retail outlets, while only 4% was distributed to wholesalers and 17% to independent retailers. In addition, it was learned that a portion of the fresh finfish distributed to Houston wholesalers from the Laguna Madre district was in turn distributed to restaurants in the Galveston district. This observation lends support to the conclusion that the demand for fresh

finfish in the Galveston district exceeds the available supply. This fact might help to explain why so little fresh finfish is distributed to wholesalers from the Galveston district.

In the Aransas and Laguna Madre district (the Laguna district in particular), most of the fresh finfish were distributed to the wholesale trade level. In the Laguna Madre district, 99% of the fresh finfish accounted for was distributed to the wholesale trade level, and virtually all of this 99% was distributed to wholesalers over one-hundred miles away from the dealers' places of business. In these two southern most districts, the supply of finfish available for consumption far exceeded the demand within the two fishing districts. Consequently, there was a need to locate distant markets, primarily in the large inland metropolitan areas of Houston, San Antonio, Austin and Dallas. The demand for fresh finfish within these distant metropolitan areas would be extremely difficult to serve by the dealers in the Aransas and Laguna Madre districts. Therefore, fresh finfish were distributed to local wholesalers within the metropolitan areas who could more efficiently perform the marketing functions in serving the demand for fresh finfish in the inland markets. It can be seen that the type of distribution channel utilized by a given dealer is at least partially a function of (1) the relationship of supply of fresh finfish relative to the demand, and (2) the distance to which the fresh finfish must be shipped in reaching potential markets.

From the inland wholesaler trade level, 80% of the fresh finfish accounted for was distributed to independent retailers, while 18% was sold directly to ultimate consumers through vertically integrated retail markets, and 2% was distributed to other wholesalers (which of course eventually distributed the 2% to the retail trade level). Reasons for the greater proportion of finfish being distributed to the independent retailer trade level are (1) there are larger numbers of independent retailers merchandising fresh finfish in the inland areas to be served, and (2) the distances to which the fresh finfish must be shipped are relatively short, because the independent retailers are concentrated within the confines of the various metropolitan areas.

In addition, vertically integrated inland wholesalers must maintain good working relationships among their retail customers since their very livelihood depends upon these independent retailers. The wholesalers cannot antagonize the retailers by undercutting their fresh finfish prices and "cut into" the retailers' market. As a result, there tends to be a "suitable balance" among vertically integrated wholesalers and independent retailers. For these reasons channel relationship constraints are placed upon the inland wholesalers which limit the extent to which they are able to market fresh finfish through vertically integrated channels.

At the coastal dealer trade level, vertically integrated sales of fresh finfish are large relative to sales of fresh finfish in

independent retail markets. This is true because: (1) the dealers have traditionally taught the consumers that fresh finfish may be obtained at their places of businesses; hence, the large quantities of fresh finfish sold through vertically integrated markets; (2) the dealers have developed a large patronage over the years which reduces the opportunity for independent retailers to market fresh finfish.

It was also noted that restaurants account for almost 40% of the entire volume of fresh finfish distributed to ultimate consumers by the entire Texas retail trade level. This observation, in combination with the significance of fresh finfish sales to ultimate consumers through vertically integrated wholesalers, suggests that the independent retailers are not participating in the marketing and promotion of fresh finfish to the extent that they can. These considerations tend to support the conclusion that consumers are not being adequately served and satisfied by the retail markets, and therefore select restaurants as their primary alternative in satisfying their need for fresh finfish. In effect, the retail fish markets for some unknown reason are neglecting a marketing opportunity.

Finally, it was shown that of the total volume of fresh finfish consumed in the state of Texas roughly two-thirds of the fresh finfish were consumed in the coastal regions (including the Houston metropolitan area), while 15% was consumed in the Austin area, and 7% was consumed in the Dallas area. For the purpose of illustrating the concentration of fresh finfish consumption in Texas, the

Houston metropolitan area was considered a part of the coastal region.

These findings might suggest that, among inland markets for fresh finfish, the quantity of fresh finfish consumed is a function of the distance of the inland market from the Texas coast. One might conclude that the inland markets are receiving "the left-overs" which remain after the demand for fresh finfish in the coastal regions has been supplied, and that the existing demand and potential market for fresh finfish in the inland areas remains unsatisfied.

## CHAPTER VI

### DISTRIBUTION AND MARKETING PROBLEM AREAS WITHIN THE MARKETING CHANNELS

This chapter presents information on various distribution and marketing problem areas identified by fresh finfish wholesalers and from an evaluation of industry activities, practices and policies observed during the research study.

An attempt was made to identify various kinds of problems by questioning the wholesalers about problem areas encountered in the following areas:

1. dealing with suppliers who provide the wholesalers with quantities of fresh finfish;
2. dealings with customers who purchase fresh finfish from the wholesalers;
3. performance of marketing functions and services at the wholesaler trade level.

In addition, the wholesalers were asked to offer their opinions concerning the most important problem area within the Texas fishing industry which needs to be resolved to improve the industry's over-all efficiency and performance.

These problem areas are first discussed in general terms, describing the different types of problems revealed by all wholesalers

of fresh finfish. Following this, individual consideration is given the problems reported by the coastal dealer trade level and the inland wholesaler trade level. Finally, consideration is given to the problem areas reported by small wholesaling firms as opposed to large wholesaling firms.

Problem Areas Identified at the Wholesaler Trade Level

Although a wide variety of problems were revealed by the wholesalers investigated during the study, it is possible to categorize them into four general areas:

1. Difficulty in purchasing adequate quantities of finfish.
2. Pollution problems.
3. Governmental regulation affecting the industry.
4. Channel myopia and lethargy.

One of the most important and frequently mentioned problems reported by the wholesalers investigated was the difficulty in purchasing adequate quantities of fresh finfish to satisfy the existing demand. It was reported in Chapter III that this difficulty might be attributed to the increasing difficulty in attracting new harvesters to the Texas fishing industry. Many of the existing commercial fishermen, especially the younger ones, are taking on secondary or permanent jobs in other vocational fields because of the greater monetary reward obtainable relative to that received from harvesting finfish.

A second major problem reported by Texas fresh finfish wholesalers, which is closely related to the problem in purchasing adequate quantities

of finfish, and also to the increasing difficulty in attracting new harvesters, was pollution of the coastal waters. It appears that the effects of pollution have been to cause an unwillingness on the part of fresh finfish wholesalers and other institutions to purchase finfish taken from polluted waters along the Texas coasts, and for this reason as well as others poses a serious threat to the future of the marketing of fresh finfish in Texas. It was reported that refunds had been given to customers who complained of an "oily" taste in the flesh of finfish species harvested from waters and bays within the Galveston fishing district. The wholesalers in the Houston metropolitan area indicated they avoid purchasing finfish produced in the Galveston district because of this "oily taste". Moreover, it was learned that, occasionally, the Houston wholesalers deliver fresh finfish to Galveston restaurants which had been transported to them from the Laguna Madre district. This was at least partially attributed to the pollution problems in the Galveston bay area.

Finally, it is quite probable that coastal pollution, especially in certain areas, has resulted in a movement of finfish species to other less polluted areas--such as the coastal waters of Mexico--which further reduces the opportunity for commercial harvesters in Texas, and consequently contributes to the Texas fishing industry's increasing dependence upon fresh finfish imported from Mexico.

Inter-related with the first two major problem areas afflicting the Texas fishing industry is governmental regulation. It was pointed out in Chapter III that state zoning laws have resulted in a closure

of the preponderance of Texas coastal waters and bays to commercial net and seine fishing, restricting Texas harvesters to the hook and line method as the sole legal means for taking finfish species. Many wholesalers maintained that these regulations were an important factor which caused a difficulty in the purchase of sufficient quantities of fresh finfish to satisfy the existing demand. Furthermore, the wholesalers felt that the Texas fishing industry could be benefitted through a larger supply of finfish if the state government were to remove these restrictions.

Thus, it is possible to see how the three inter-related categories of problems mentioned above are instrumental in causing many Texas wholesalers to drop out of the channels entirely, or begin purchasing fresh finfish imported from Mexico, or begin marketing other types of merchandise such as shrimp, shellfish, and frozen seafood products to supplement their business revenues.

Many wholesalers have refused to merchandise fresh finfish imported from Mexico, claiming that it is an "inferior good" relative to Texas-produced finfish. These wholesalers have continued to merchandise what small quantities of Texas-produced finfish they are able to purchase, while the Mexican imports continue to make inroads into the Texas fresh finfish markets. These "die-hard" wholesalers who refuse to merchandise Mexican imports find it extremely difficult to compete on a price basis with wholesalers who do merchandise Mexican imports since the fresh finfish produced in Mexico, because of the "cheap

"labor" available there, are purchased and sold at significantly lower prices relative to Texas-harvested finfish.

The fourth category of marketing problem areas identified at the wholesaler trade level is "channel myopia" and lethargy. Generally, it can be said that the majority of fresh finfish wholesalers, especially the smaller ones, did not recognize the myopic and lethargic problems that characterize the Texas fishing industry.

There appears to be an apathy or "sluggishness" within the marketing channels for fresh finfish in Texas. That is, there is a lack of innovation and creativeness among the Texas fresh finfish wholesalers in terms of the marketing functions, practices, and promotional efforts they perform. This lack of creativity can be exemplified by the preponderance of wholesalers investigated who indicated there has been no change in the kinds of marketing services performed during the last ten or fifteen years (or since the establishment of the firm), nor are there any measurable promotional efforts undertaken within the channel to stimulate the demand for fresh finfish.

It was pointed out in Chapter IV that wholesalers of fresh finfish had indicated a decreased trend in importance of independent retail markets, especially supermarkets, in terms of quantities of fresh finfish merchandised. This trend was attributed by them to an apathetic attitude and unwillingness to perform the kinds of marketing functions required in merchandising fresh finfish. This trend was again substantiated in Chapter V by showing that independent retail markets

are not merchandising a significant volume of fresh finfish relative to vertically integrated retail markets and restaurants.

There has been no development of strong channel relationships among participants within the channels. Nor does there appear to exist in most cases a "channel leader". With only a few exceptions, most of the fresh finfish wholesalers do not actively attempt to develop new markets for their fresh finfish or to build a strong rapport among their customers. However, this may be partially attributed to the deficiency in the supply of finfish available to the wholesalers. Most of the wholesalers indicated they never experience any difficulty in "unloading" their fresh finfish inventories.

Even though there is a tendency toward a lack of strong relationships and rapport among channel participants, the majority of the wholesalers maintained at least a few "regular" suppliers and customers. These regular customer-supplier relationships have developed over the years among the larger, more well-established, and more dependable firms. Because of the traditional certainty of demand and certainty of available supply from certain dependable suppliers, there is a natural tendency for these "better" firms to merchandise the "lion's share" of fresh finfish marketed in Texas. As a result of the lack of strong rapport among the "less important" channel participants, there tends to be a great deal of price-influenced jumping from wholesaler to wholesaler among the smaller and less well-established purchasers of fresh finfish.

There are no industry or trade associations within the Texas fishing industry. Yet, many wholesalers indicated that some sort of cooperative association would be beneficial to all industry participants in that it would provide a means of stabilizing prices, improving "buying power" of merchandise, and lobbying efforts in government. One large wholesaler indicated that a cooperative organization would benefit the industry participants as a group, but that he, as well as most of the other wholesalers of fresh fish who were merchandising larger than average volumes of fresh finfish through more conscious business efforts and activities, would not be benefitted and "would not want to work together" for that reason. This statement seems to suggest that a cooperative organization would in effect support the "little man" through providing him with larger supplies of fresh finfish and consequently a competitive uplift which would enable him to cut into the large wholesalers' markets. Consequently, it can be understood why the larger and more successful fresh finfish wholesalers would desire to keep the industry as it now exists, with no cooperative organizations that would enable the small firms to erode their fresh finfish markets.

In addition, it was indicated by the majority of wholesalers that a cooperative organization among the producers or harvesters of fresh finfish was completely unthinkable because of the extremely low-class people characteristic of the harvesting "trade level". As one wholesaler stated it: "If you put all of them together in the same room, they'd start fighting."

As a result of the lack of trade organizations in this industry, there is a lack of communication and dissemination of information within the industry. Except by "word-of-mouth", few of the participants have any knowledge about what the others within the industry or within their own trade level are doing.

Problem Areas Reported by Coastal Vs. Inland Wholesalers of Fresh Finfish

In general, there was much similarity between the kinds of problems identified among the coastal wholesalers and inland wholesalers. It does appear, however, that the inland wholesalers, as a whole, displayed a stronger tendency to cite governmental regulation of nets and seines as one of the major problems afflicting the Texas fishing industry. However, this occurrence might be explained by the fact that the inland wholesalers, experiencing difficulty in purchasing adequate quantities of fresh finfish from the coastal wholesalers, would blame the deficiency of the finfish supply upon the most obvious cause -- the regulation of nets and seines in harvesting finfish. That is, the inland wholesalers, separated from the coast by long distances, tend to blame governmental regulation for the deficiency in supply since they are less familiar with other possible causes that could be recognized from close proximity to the coastal conditions, such as the pollution problems and the decreased number of commercial fishermen. This statement might be supported by the fact that Houston fresh finfish wholesalers -- located near the coast -- recognized the problems of

pollution and the decreased number of fishermen, even though they, too, criticized governmental regulation.

Inland fresh finfish wholesalers tended to cite as one of their main problems the difficulty in obtaining adequate quantities of finfish from the coastal wholesalers. In addition, the inland wholesalers expressed concern about the quality of freshness of the finfish and the care with which it is processed and refrigerated by their suppliers. On the other hand, the coastal wholesalers cited dishonesty and unreliability such as price cutting or "dumping" of inferior merchandise as the major problem in dealing with suppliers.

With respect to dealing with customers, inland and coastal wholesalers seemed to have different problems. Coastal wholesalers, especially the smaller ones, perceived few or no problems in dealing with customers, except for occasional "dishonesty", "shortweighting" of merchandise, or the tendency for customers to demand certain sizes of finfish which sell better relative to other sizes. A large coastal wholesaler mentioned a physical distribution problem in dealing with customers, in that there was no satisfactory method of rapidly shipping fresh finfish long distances to scattered retail markets since the Railroad Express delivery service had been discontinued more than fifteen years ago.

Virtually all the inland wholesalers complained that their customers demand delivery of finfish "too rapidly". That is, the customers do not allow enough "lead time" between placement of the order and expected delivery of the order. Consequently, the wholesalers reported

difficulty in filling orders within the short length of time demanded by customers. It is quite likely that this kind of problem is experienced among inland wholesalers more so than coastal wholesalers because of the differences in the markets they serve. In chapter V it was pointed out that coastal wholesalers distribute most of the fresh finfish to inland or other wholesalers (78%), while inland wholesalers distribute virtually all of their fresh finfish to retail markets and restaurants. Thus, the delivery demands because of the large number of restaurants served who reportedly display a tendency to order fresh finfish from the inland wholesalers on a "meal to meal" basis.

Generally speaking, both the inland and coastal wholesalers exhibited the myopic and lethargic characteristics discussed earlier in this chapter. However, there appeared to be more promotional effort among the inland wholesalers than the coastal wholesalers. A few of the fresh finfish wholesalers in the inland areas reported that "choice" restaurant customers were given assistance in the development and placement of newspaper advertisements for fresh finfish. One large wholesaler placed advertisements for their better restaurant customers in the Houston Restaurant Association magazine, and the Texas Restaurant Association magazine. Other inland and coastal wholesalers reported that recipes and brochures were distributed to retail markets. These brochures were not developed by the wholesalers, but were initially distributed to the wholesalers by the Texas Parks and Wildlife Department.

Problem Areas Reported by Small Vs. Large Wholesalers

There were no significant discrepancies in the kinds of problems identified among small wholesalers as opposed to large wholesalers of fresh finfish. There were, however, variations in the kinds of problems mentioned and perceived by different wholesalers but not attributable to differences in the size of the firm.

It appears that the major difference among the large and small wholesalers was the business and marketing attitudes and recognition of underlying causes of the industry's problems. The extremely small wholesalers displayed a tendency to perceive the industry's shortage of finfish as being caused solely by governmental regulation. These small firms felt that their operations, as well as the entire Texas fishing industry, could be improved if the government were to open the coastal waters and bays to commercial net and seine fishing. In addition, the majority of the smaller firms perceived no problems in dealing with customers, except for the fact that they could not supply the customers with adequate quantities of fresh finfish.

Finally, these small firms appeared to display a "fatalistic" attitude, in that they felt the industry's problems were no cause of their own and that nothing could be done about the problems other than increasing the supply of fresh finfish through opening up coastal waters to net and seine fishing. This type of attitude, however, might be linked to the financial incapability of the small firms to do anything about the problems they have. Since they are small, in terms of size and financial capabilities, there is a tendency to

feel that they are at the mercy of the government and "fate" itself. Consequently, there is little need to even attempt to look for other kinds of marketing and distribution problems which they might resolve in an attempt to better their business operations.

On the other hand, several of the larger fresh finfish wholesalers recognized the existence of many of the myopic and lethargic conditions mentioned in this chapter and expressed concern about the correction of these kinds of problems. Even though there was a tendency to recognize the existence of these stagnant conditions, no measures had been undertaken in an attempt to correct them.

#### Summary

In this chapter, it was pointed out that the problems identified and observed within the marketing channels in the Texas fishing industry could be categorized in the following general areas: (1) difficulty in purchasing adequate quantities of fresh finfish; (2) pollution problems; (3) governmental regulations affecting the industry; and (4) channel "myopia" and lethargy.

The first three problem areas mentioned above were shown to be closely interrelated, in that all three pertain to the difficulty experienced by Texas fresh finfish to satisfy existing demand. Consequently, these three problem areas contribute to the Texas fishing industry's increasing dependence upon fresh finfish imported from Mexico. With respect to the fourth category - channel "myopia" and lethargy - there seems to be a lack of innovation and creativeness within the marketing channels for fresh finfish in terms of marketing

functions, practices, and promotional efforts, nor development of strong channel relationships among the participants within the channels. There appears not to exist any predominant "channel leaders" within the channels, and consequently, with only a few exceptions, fresh finfish wholesalers do not actively attempt to develop new markets for their fresh finfish a strong rapport among their customers. There are no industry or trade associations within the Texas fishing industry. As a result of the lack of industry and trade organizations, there is consequently a lack of communication and dissemination of information within the industry. The cumulative effect of these various problem areas is to cause a general instability and inefficient performance within the Texas fishing industry.

Generally, there was not a large discrepancy between the kinds of problems reported and observed at the coastal and inland wholesaler trade levels, although there tended to be a greater tendency among the inland wholesalers to cite governmental regulation of nets and seines as one of the major problems afflicting the Texas fishing industry.

With respect to problems experienced in dealing with suppliers, inland wholesalers reported difficulty in purchasing sufficient quantities of finfish while coastal dealers reported problems related to supplier dishonesty and unreliability. In addition, the inland wholesalers expressed concern, about the quality or freshness of fresh finfish and the care with which it is processed and handled.

With respect to problems experienced in dealing with customers, coastal wholesalers reportedly "experienced few serious problems", while the inland wholesalers experienced difficulty in satisfying retail and restaurant customers because "they demand delivery too rapidly." In addition, one coastal wholesaler reported a physical distribution problem, in that there is no satisfactory method of rapidly shipping fresh finfish long distances to scattered retail markets.

Finally, it appeared that the major differences between "small" and "large" fresh finfish wholesalers was in the business and marketing attitudes and recognition of underlying causes of the Texas fishing industry's problems. That is, the smaller wholesalers seemed to be unaware of the existence of problems other than that of governmental regulation and the difficulty in obtaining fresh finfish from harvesters. On the other hand, the larger wholesalers seemed to be more knowledgeable with respect to underlying industry problems, in that they recognized the "myopic" and lethargic conditions mentioned earlier. No measures, however, had been undertaken by these "knowledgeable" large wholesalers in an endeavor to correct such problems.

The conclusions that may be drawn from this consideration of problem areas is that the very nature and characteristics of the participants within the marketing channels for fresh finfish are greatly responsible for the apparent instability and inefficient performance characteristic of the industry. Although certain external problems over which industry participants have little control beset the industry -- such as governmental regulation and coastal pollution -- myopic,

lethargic and apathetic marketing activities and business attitudes, without question, contribute greatly to the less than desirable status of the Texas fishing industry.

Evidence suggests that the potential market for fresh finfish is yet to be tapped. Surprisingly, with what seems to be a nearly perfect marketing opportunity, there are few institutions merchandising fresh finfish within the state of Texas which display signs of "abounding prosperity." This phenomenon might be attributed to the myopic, lethargic and apathetic attitudes and to the fact that participants within the Texas fishing industry tend to be "production oriented" as opposed to "marketing oriented". That is, the majority of firms merchandising fresh finfish in Texas tend to feel that the key to increased productivity and profits is an increased supply of merchandise, rather than a conscious endeavor to satisfy the consumer at a reasonable profit which ultimately leads to increased productivity and profit through "repeat sales" and an expanded market for their product offerings.

## CHAPTER VII

### SUMMARY AND CONCLUSIONS

It has been generally accepted that the seafood industry in Texas is plagued with structural problems, many of which can be traced to the distribution channels and the nature and characteristics of the institutions in the trade levels within the channels. Before problem areas within the distribution structure of Texas seafoods can be resolved, and more generally, before problem areas within the entire Texas fishing industry can be resolved, it is first necessary to know what distribution channels are used by the industry and what functions and practices are associated with the channels.

This research project was undertaken with the following objectives in mind: first, to define and map the paths taken by fresh finfish originating in the Texas Gulf Coast Region as they move from the Gulf to the consumer's dinner plate; and second, to provide information pertaining to the performance of distributional activities and attending marketing and distribution problems at various trade levels within the channels.

Attention was focused upon fresh finfish as opposed to shellfish and shrimp primarily because less is known about the finfish product category than the shrimping industry which has been more researched.

The wholesale trade level was the only trade level under direct investigation in this research project. Data and information concerning

the other trade levels were obtained indirectly from the wholesale trade level. During this project, twenty-seven wholesalers out of approximately 210 located in the state of Texas were contacted and questioned in areas relevant to the objectives of this study. Fifteen of these fresh finfish wholesalers were located along the Texas Gulf Coast, while the remainder were located within the inland metropolitan areas of Houston, Dallas, San Antonio, and Austin.

From personal and telephone interviews with these twenty-seven wholesalers, it was possible to determine the geographical areas to which fresh finfish originating in the Texas Gulf Coast Region were distributed and ultimately consumed, as well as the paths taken by the finfish in reaching the areas in which they were consumed. This became a descriptive framework of the market structure for fresh finfish, illustrating the various "pipelines" or channels used by the Texas fishing industry in distributing the fresh finfish species and associated tonnages moving through each major channel. In addition, it was possible to identify various problem areas associated with the performance of marketing and distributional functions and services within the channels, as well as more general problems which beset the entire Texas fishing industry as a whole.

#### Finfish Species Associated with the Texas Fishing Industry

The first step undertaken in this research project was the presentation of data and information on the volume of the various species of finfish landed in Texas annually since 1951, with special emphasis placed upon an analysis of the landings reported in 1970.

The sources of data used in compiling the information and data pertaining to finfish species landed in Texas and imported from Mexico were: (1) Texas Landings, published by U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Services, Washington, D.C., in cooperation with the Texas Parks and Wildlife Department, Austin, Texas; (2) U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Services, Division of Statistics and Market News; E.J. Barry, New Orleans, Louisiana.

The six major finfish species associated with the Texas fishing industry are the Red Snapper, Redfish, Sea Trout, Black Drum, Flounder and Sheepshead. It was shown that there has been an increasing trend in annual Texas landings of these six species during the last twenty years. Total landings for five of the individual species have also been increasing annually during the last twenty years, with the only exception being Red Snapper.

It was shown that the Sheepshead and Flounder species have historically constituted a rather small percentage of the total catch, while Red Snapper, Redfish, Sea Trout and Black Drum have constituted the greater bulk of the total landings. It was also shown that in recent years Red Snapper and Black Drum have been decreasing in relative importance, while the Sea Trout and Redfish species have displayed an increasing trend in importance relative to the total catch. (See Figure 3-1, p. 19 for an illustration of these relationships.)

Relative to the total finfish supply available for Texas consumption (finfish landed in Texas plus finfish imported from Mexico), quantities of fresh finfish imported from Mexico were shown to be increasing in importance since 1967. This indicates that the Texas fishing industry is increasingly dependent upon Mexican imports in satisfying the domestic demand for fresh finfish.

Several reasons might be attributed to this. First, Texas wholesalers of fresh finfish reported an increasing difficulty in purchasing adequate quantities of finfish from Texas harvesters each year. This difficulty in purchasing adequate quantities of finfish might be partially explained by the fact that there are fewer new harvesters attracted to the Texas fishing industry each year. Some of the existing commercial harvesters were reported to have at least partially ceased commercial harvesting efforts or taken on secondary or permanent jobs in other vocational fields because of the greater monetary reward obtainable relative to that received from commercial finfish harvesting.

Second, it has been reported that the effects of coastal pollution have caused an unwillingness on the part of fresh finfish wholesalers and other institutions to purchase finfish taken from polluted areas along the Texas coast. It is quite probable that coastal pollution, especially in certain coastal areas in Texas, has resulted in a movement of finfish species to other less polluted areas, such as the coastal waters of Mexico, thus further reducing the opportunity for commercial harvesters in Texas.

Finally, it was reported that the lack of zoning and netting laws and abundance of finfish species in Mexico, in combination with the "cheap labor" available there, make it possible for fresh finfish to be imported at far lower prices than must be paid to Texas harvesters. Because of these kinds of conditions mentioned above, it becomes easy to justify the Texas fishing industry's increasing dependence upon Mexican imports.

The Texas Gulf Coast is divided into five sections called fishing districts, for which records are kept on the tonnage of each species landed in each district. These districts, listed in descending order according to the associated tonnage of fresh finfish contributed to total Texas Landings in 1970 are: the Laguna Madre district with 2,690,000 pounds, the Aransas district with 1,044,000 pounds, the Galveston district with 567,000 pounds, the Matagorda district with 502,000 pounds, and the Sabine district with 150,000 pounds. (See Figure 3-1, p. 19 for locations of these five fishing districts.) It was shown that the two southern-most districts, the Laguna Madre and Aransas districts, collectively provided 75% or roughly 3,750,000 pounds of the 4,953,000 pounds of finfish landed in Texas during 1970, suggesting the more than important role that these two fishing districts play in the landings of Texas finfish.

#### The Structure of the Texas Fishing Industry

With a basic understanding of the finfish species and attending tonnages associated with the Texas fishing industry in mind, the next

step in this report was to describe the various paths through which fresh finfish may flow in reaching the place of final consumption, providing an understanding of the overall channel structure of the Texas fishing industry. Chapter IV discussed the institutional components of the trade channels in terms of their functions and roles within the structure of the Texas fishing industry. These institutional components or intermediaries were shown to be: the producers or harvesters, coastal dealers, inland wholesalers and retailers (retail markets, restaurants and institutions).

The only intermediary that merits description is the "coastal dealer", since the others are familiar and self-explanatory. The coastal dealer may be defined as a wholesaler situated on the Texas coast which typically purchases finfish directly from the harvesters and distributes to other wholesalers and retailers.

Various "combinations" of these institutional components have evolved over the years to form the channel network or structure utilized by the Texas fishing industry. Since there is a cost value attached to the performance of these functions such as physical distribution and storage, buying, selling, and processing, various trade channels involving certain of the institutional components have evolved and will continue to evolve, depending upon the efficiency with which the functions can be performed and the functions and services demanded by ultimate consumers of fresh finfish. The various channels in which it is possible for fresh finfish to move from the sea to ultimate consumers were shown to be:

Channel 1: Harvester — Dealer — Wholesaler — Retailer —  
Ultimate Consumer

Channel 2: Harvester — Dealer — Retailer — Ultimate Con-  
sumer

Channel 3: Harvester — Dealer — Ultimate Consumer

Channel 4: Harvester — Retailer — Ultimate Consumer

Channel 5: Harvester — Ultimate Consumer

Another "incidental channel" was shown to be: Harvester — "Street Peddler" — any firm or ultimate consumer that will buy. A "street peddler" is a person who purchases finfish from harvesters or harvests the finfish himself and "peddles the fish on the street" to any firm or ultimate consumer that is willing to buy his merchandise.

The practice of vertical integration was shown to be significant within the channels, and normally occurs between the harvester and "dealer" trade levels, or between the dealer or wholesaler and retailer trade levels.

The state zoning laws applicable to the Texas fishing industry were considered. These laws prohibit the utilization of nets and seines in harvesting finfish from the majority of the coastal waters and bays in Texas. The importance of these laws to the Texas fishing industry is that the majority of the waters and bays are closed to commercial net fishing (the harvesters are restricted to use of hook and line), consequently contributing to an increasing dependence upon Mexican finfish imports.

Analysis of the Channels of Distribution Utilized in the Marketing of Fresh Finfish

Chapter V analyzed data pertaining to the marketing channels identified and observed during this research project. Section I of the analysis discussed, individually, the channels utilized by the coastal wholesalers and the inland wholesalers and an analysis of the allocation of fresh finfish among the various types of retailers within the retail trade level.

Section II presented an analysis of the geographic distribution of fresh finfish at the coastal and inland wholesaler trade levels. Data on the total tonnage of finfish were derived from estimates made by the Texas wholesalers on the total amount of fresh finfish purchased and sold during 1970. Approximately 70% of the 1970 Texas Landings and 95% of Mexican imports were accounted for in the study.

An analysis of the collected data indicated that 78% of the 6,595,000 pounds of fresh finfish accounted for at the coastal wholesaler trade level were distributed to the inland wholesalers and retail trade level before reaching ultimate consumers. Thus, this combination of trade levels constituted the predominant marketing channel for fresh finfish taken from the coastal waters of Texas and imported into Texas from Mexico. Other major distribution channels utilized by the coastal dealers were: (1) Harvester — Coastal Dealer — Ultimate Consumer, through which 14% of dealer tonnage reached ultimate consumers, and (2) Harvester — Coastal Dealer — Independent Retailers — Consumer, through which the remaining 8% of the dealer tonnage reached ultimate consumers.

Differences were noted in the relative importance of these three major channels within the five coastal fishing districts. It was shown that the variations in the types of channels utilized among the coastal fishing districts is at least partially a function of: (1) the relationship of the supply of fresh finfish relative to the demand within the district, and (2) the distance to which the fresh finfish must be shipped in reaching potential markets.

Vertically integrated sales of fresh finfish to ultimate consumers at the coastal wholesaler trade level was shown to be important relative to the volumes of finfish sold to ultimate consumers by independent retailers and restaurants. This might be explained by the facts that (1) the relationship of the supply of fresh finfish relative to the demand within the district, and (2) the distance to which the fresh finfish must be shipped in reaching potential markets.

Vertically integrated sales of fresh finfish to ultimate consumers at the coastal wholesaler trade level was shown to be important relative to the volumes of finfish sold to ultimate consumers by independent retailers and restaurants. This might be explained by the facts that (1) the coastal dealers have traditionally taught the consumers that fresh finfish is available at their business places; (2) the dealers have developed a large patronage over the years which reduces the opportunity for independent retailers to market fresh finfish.

At the inland wholesaler trade level, 80% of the 5,515,000 pounds of fresh finfish accounted for was distributed to independent retailers while 18% was sold directly to ultimate consumers through vertically

integrated retail markets, and 2% was distributed to other wholesalers who eventually distributed this to the retail trade level.

The greater portion of fresh finfish are distributed to the independent retailers because: (1) there are larger numbers of independent retailers merchandising fresh finfish in the inland areas which must be served, and (2) the distances to which the fresh finfish must be shipped are relatively short, since the independent retailers are concentrated within the confines of the various metropolitan areas. In addition, vertically integrated wholesalers must maintain good working relationships with the independent retailers because their very livelihood depends upon those independent retailers that purchase from them many other types of merchandise in addition to fresh finfish. Since the inland wholesalers cannot antagonize the independent retailers by "cutting heavily" into the retailers' fresh finfish markets, the inland wholesalers are limited in terms of the extent to which they are able to market fresh finfish through their own vertically integrated channels.

With respect to the volume of fresh finfish associated with the entire trade level in Texas, it was shown that restaurants play the most important role in distributing finfish to ultimate consumers relative to vertically integrated markets, independent retailers, and institutions (schools, hospitals, etc.). This observation, in combination with the significance of fresh finfish sales to ultimate consumers through vertically integrated wholesalers, suggests that the independent retailers are not participating in the marketing and promotion of finfish to the extent of their potential.

These considerations tend to support the conclusions that customers are not being adequately served and satisfied by the retail markets, and therefore consumers select restaurants as their primary alternative in satisfying their need for fresh finfish. In effect, the retail markets for some unknown reason are neglecting a marketing opportunity.

Finally, it was shown that of the total volume of fresh finfish consumed in the state of Texas, roughly two-thirds of the fresh finfish were consumed in the coastal regions (including the Houston metropolitan area), while 15% was consumed in the San Antonio area, 12% in the Austin area, and 7% in the Dallas area.

Of the total tonnage of fresh finfish accounted for in the study, 15% of the coastal dealer tonnage was distributed outside the state of Texas; this 15% distributed out-of-state originated from the largest coastal dealer in the state of Texas, located in the Laguna Madre fishing district. Only 12% of the inland wholesaler trade level was shipped out-of-state and was shipped by a large fresh finfish wholesaler in Dallas, Texas.

One might conclude that the inland markets are receiving the "left-overs" which remain after the demand for fresh finfish in the coastal regions has been satisfied, and that the existing demand and potential market for fresh finfish in the inland areas remains unsatisfied.

#### Distribution and Marketing Problem Areas Within the Marketing Channels

The problems identified and observed within the marketing channels in the Texas fishing industry can be categorized in the following general areas:

1. Difficulty in purchasing adequate quantities of fresh finfish.
2. Pollution problems.
3. Governmental regulations affecting the industry.
4. Channel "myopia" and lethargy.

The first three problem areas mentioned above were shown to be closely interrelated in that all three pertain to the difficulty experienced by Texas fresh finfish wholesalers in obtaining adequate quantities of fresh finfish to satiate existing demand. Consequently, these problem areas contribute to the Texas fishing industry's increasing dependence upon fresh finfish imported from Mexico.

With respect to the fourth category of channel "myopia" and lethargy, there seems to be a lack of innovation and creativeness within the marketing channels for fresh finfish. That is, there tends to be a lack of innovation and creativeness among Texas fresh finfish wholesalers in terms of marketing functions, practices and promotional efforts. There are no "channel leaders" within the channels, and consequently there tends to be no attempts to develop new markets or strong business relationships among channel participants.

In addition, it was shown that there are no industry or trade associations of any kind within the Texas fishing industry which contributes to a lack of communication and dissemination of information among the channel participants.

The conclusions drawn from consideration of the problem areas was that the very nature and characteristics of the participants within

the marketing channels for fresh finfish are greatly responsible for the instability and inefficient performance of the Texas fishing industry. Although certain problems over which the industry participants have little control beset the industry - such as governmental regulation and coastal pollution -- "myopic" and apathetic business and marketing attitudes, without question, contribute greatly to the less than desirable status of the Texas fishing industry.

Evidence suggests that the potential market for fresh finfish is still to be tapped. Yet, if it was shown that even with what seems to be a nearly perfect marketing opportunity, few institutions displayed signs of "abounding prosperity". Channel participants within the marketing channels for fresh finfish are typically "production oriented" as opposed to "marketing oriented", which is closely related to the myopic, lethargic, and apathetic attitudes mentioned above. The majority of firms merchandising fresh finfish in Texas tended to feel that they key to maximized productivity and earnings is an increased supply of merchandise available for sale, rather than a conscious endeavor to satisfy the ultimate consumer's desires at a reasonable profit. This approach, a marketing oriented approach, ultimately leads to increased productivity and earnings through "repeat sales" and an expanded market for their product offerings.

#### Evaluation of the Study

The value and importance to be derived from this research study is that it serves as a "first step" in bringing about remedial actions

to improve the overall efficiency and performance of the Texas fishing industry and consequently provide greater consumer satisfaction with fresh finfish. By investigating the channels and the movement of fresh finfish through the trade levels within the channels, it was possible to uncover problem areas which help to determine the direction in which additional research might be conducted to improve the overall efficiency of the Texas fishing industry.

Additional research might be conducted for the purpose of determining the causes of the difficulty experienced by Texas fresh finfish wholesalers in obtaining sufficient quantities of fresh finfish from commercial harvesters. Research in this area would be useful in determining the relative importance of (1) coastal pollution and its implications to shifts or reductions in finfish specie populations, (2) governmental regulation of nets and seines, and (3) alternative occupations which attract existing and potential harvesters through offering greater monetary rewards.

Additional research might also be conducted in the form of governmental or university experiments with "promotional packages" and improved merchandising techniques, particularly at the retail trade level.

The purpose of experiments of this nature should be to demonstrate that conscious marketing and promotional efforts at the retail trade level can result in increased fresh finfish sales at this level, through consumer education, stimulation of demand and greater consumer satisfaction. Therefore, increased profitability from merchandising

fresh finfish is possible. If such experiments can be proved to increase the profitability of marketing fresh finfish at the retailer trade level, it could possibly serve as a first step in changing the apathetic attitudes characteristic of this trade level.

A third opportunity might be to experiment with wholesaler-based innovative marketing activities. For example, at one time many small inland retailers were supplied fresh finfish daily by Railroad Express Agency (REA). This service ceased more than fifteen years ago. An alternative to this service, which might again stimulate retailer interest, would be over-night delivery by bus companies such as Greyhound Inc., using properly designed lugs in which to transport fresh finfish.

A fourth opportunity for research, arising out of this study, might be to encourage stronger channel leadership on the part of coastal wholesalers. For example, experimenting with (1) undermarketed fish species such as golden croaker and black drum, (2) processing and pre-packaging of fish fillets for retail markets, or (3) developing instant-quick-frozen (IQK) techniques applicable to coastal wholesaler's capacities and capabilities.

Clearly there are many avenues which channel participants may choose to take to improve their lot as well as the industry's as a whole. This study was undertaken to uncover these possible alternatives. Effective and efficient marketing channels evolve because aggressive marketers seek to combine optimal minimum cost with optimal services provided the consumer. These do not just happen, but

come through planned innovative marketing strategies. This, unfortunately, is a fact which the Texas fishing industry has yet to learn and to implement.

## **APPENDICES**

## **APPENDIX A**

APPENDIX A

FRESH FINFISH DEALERS LISTED IN DESCENDING ORDER  
ACCORDING TO TONNAGE OF FRESH FINFISH MERCHANDISED IN 1969

Dealer Number	Fishing District	County	Tonnage	% of Total	Cum. %
5010	Laguna	Nueces	383,573	7.26	7.26
4120	Aransas	Aransas	342,735	6.49	13.75
5090	Laguna	Willacy	318,322	6.01	19.76
3110	Matagorda	Matagorda	303,027	5.74	25.50
4040	Aransas	Nueces	286,703	5.43	30.93
5020	Laguna	Cameron	279,822	5.30	36.23
5030	Laguna	Cameron	241,585	4.58	40.81
5050	Laguna	Cameron	231,562	4.39	45.20
4023	Aransas	Aransas	228,496	4.33	49.53
5040	Laguna	Nueces	213,745	4.05	53.58
2025	Galveston	Galveston	212,783	4.03	57.61
5100	Laguna	Cameron	177,845	3.37	60.98
1070	Sabine	Jefferson	170,182	3.22	64.20
2480	Galveston	Galveston	167,445	3.17	67.37
4024	Aransas	Matagorda	127,196	2.41	69.78
4090	Aransas	Aransas	118,119	2.24	72.02
2520	Galveston	Galveston	97,970	1.86	73.88
4200	Aransas		82,000	1.55	75.43
4021	Aransas	Calhoun	80,270	1.52	76.95
5080	Laguna	Kennedy	78,770	1.49	78.44
5200	Laguna		76,510	1.45	79.89
2220	Galveston	Harris	62,951	1.19	81.08
2170	Galveston	Galveston	62,787	1.19	82.27
5060	Laguna	Cameron	58,861	1.11	83.38
5031	Laguna	Cameron	58,587	1.11	84.49
3060	Matagorda	Matagorda	56,148	1.06	85.55
2105	Galveston	Harris	55,250	1.05	86.60
4080	Aransas	Nueces	55,210	1.05	87.65
2240	Galveston	Galveston	54,902	1.04	88.69
2380	Galveston	Galveston	53,064	1.01	89.70
4130	Aransas	Aransas	52,008	.99	90.69
2360	Galveston	Harris	45,970	.87	91.56
3170	Matagorda	Matagorda	45,357	.86	92.42
3030	Matagorda	Calhoun	39,395	.75	93.17
2320	Galveston	Galveston	37,584	.71	93.88

Dealer Number	Fishing District	County	Tonnage	% of Total	Cum. %
4030	Aransas	Aransas	35,089	.66	94.54
2400	Galveston	Chambers	30,807	.58	95.12
2580	Galveston	Galveston	30,200	.57	95.69
3070	Matagorda	Calhoun	28,109	.53	96.22
2190	Galveston	Brazoria	26,897	.51	96.73
5120	Laguna	Cameron	23,002	.44	97.17
4060	Aransas	Nueces	21,838	.41	97.58
2340	Galveston	Galveston	20,274	.38	97.96
2050	Galveston	Galveston	12,392	.23	98.19
2135	Galveston	Harris	10,836	.21	98.40
2530	Galveston	Brazoria	10,640	.20	98.60
5033	Laguna	Cameron	10,343	.20	98.80
2260	Galveston	Galveston	9,804	.19	98.99
4070	Aransas	Aransas	8,989	.17	99.16
4034	Aransas	Harris	8,000	.15	99.31
4020	Aransas	Calhoun	5,486	.10	99.41
3001	Matagorda	Matagorda	5,100	.10	99.51
2200	Galveston	Harris	4,793	.09	99.60
3220	Matagorda	Matagorda	4,596	.09	99.69
4022	Aransas	Aransas	2,977	.06	99.75
3130	Matagorda	Matagorda	2,872	.05	99.80
2295	Galveston	Harris	2,347	.04	99.84
3175	Matagorda	Matagorda	2,139	.04	99.88
2250	Galveston	Harris	2,015	.04	99.92
5130	Laguna	Nueces	1,483	.03	99.95
2435	Galveston	Harris	739	.01	99.96
3180	Matagorda	Matagorda	611	.01	99.97
3140	Matagorda	Calhoun	477	.01	99.98
3200	Matagorda	Matagorda	77	.001	
2420	Galveston	Galveston	65	.001	
				5,279,756	

Source: Unpublished data, Texas Parks and Wildlife Department

## **APPENDIX B**

## APPENDIX B

### FRESH FINFISH DEALERS LISTED IN DESCENDING ORDER ACCORDING TO \$-VOLUME OF FRESH FINFISH MERCHANDISED IN 1969

Dealer Number	\$ Volume	%	%
5020	97,242	9.45	9.45
5010	83,000	8.07	17.52
4040	77,328	7.52	25.04
5090	70,992	6.90	31.94
5100	63,415	6.16	38.10
4023	55,196	5.37	43.47
3110	51,015	4.96	48.43
5030	50,320	4.89	53.32
5050	48,991	4.76	58.08
5040	45,550	4.43	62.51
1070	40,504	3.94	66.45
2480	23,504	2.28	68.73
4090	22,848	2.22	70.95
4021	18,757	1.82	72.87
2520	15,945	1.55	74.32
4120	15,869	1.54	75.86
4200	14,660	1.42	77.28
5060	14,087	1.37	78.65
4130	13,790	1.34	79.95
5200	12,628	1.23	81.18
2105	12,477	1.21	82.39
4024	11,447	1.11	83.50
5031	11,086	1.08	84.58
5080	10,825	1.05	85.63
4080	10,772	1.05	86.68
2025	10,184	.99	87.67
2580	10,180	.99	88.68
3060	9,715	.94	89.60
2240	9,248	.90	90.50
3170	8,400	.82	91.32
3030	7,516	.73	92.05
4030	7,320	.71	92.76
2380	7,277	.71	93.47
2220	6,765	.66	94.13
2360	6,622	.64	94.77

Dealer Number	\$ Volume	%	%
3070	5,946	.58	95.35
4060	5,180	.50	95.85
5120	4,651	.45	96.30
2170	4,559	.44	96.74
2400	4,404	.43	97.17
2340	3,269	.32	97.49
2190	2,721	.26	97.75
2135	2,610	.25	98.00
2320	2,484	.24	98.24
4070	2,422	.24	98.48
2050	2,302	.22	98.70
5033	2,094	.20	98.90
2530	1,909	.19	99.09
4034	1,826	.18	99.27
3001	1,258	.12	99.39
4020	1,204	.12	99.51
4022	746	.07	99.58
3130	617	.06	99.64
2260	597	.06	99.70
2295	596	.06	99.76
3175	380	.04	99.80
2200	374	.04	99.84
5130	371	.04	99.88
3220	362	.04	99.92
2250	186	.02	99.94
2435	126	.01	99.95
3140	98	.01	99.96
3180	93	.01	99.97
2420	20	.001	
3200	15	.001	
	1,028,895		

Source: Unpublished data, Texas Parks and Wildlife Department



## APPENDIX C



## APPENDIX C

### QUESTIONNAIRE FOR THE STUDY OF WHOLESALE DISTRIBUTION CHANNELS FOR FRESH FISH FROM THE TEXAS GULF COAST

This questionnaire seeks information about your business experience with suppliers and customers for fresh fish. The questionnaire is divided into three major sections; Business Ownership, Business Activities, and Problem Areas.

When specific data are requested, where possible, use your business records to answer the question. If you do not have recorded data which could answer the question, make an approximation; that is, make an educated guess based on your business experience.

Keep in mind that where descriptive information or opinions are asked, there are not right or wrong answers. Describe the situation as you view it. It is your opinion or observation about a particular matter that is most important to the success of this study.

Answer every question to the best of your ability.

Section I. Business Ownership

1. Name and location of firm \_\_\_\_\_
2. When was business started? Year \_\_\_\_\_
3. When did you first sell fresh fish at wholesale? Year \_\_\_\_\_
4. Is this establishment owned by another fish industry-related business firm? Yes \_\_\_\_\_ No \_\_\_\_\_
  - a. If so, what type of business is it? \_\_\_\_\_
5. Do you own, partially or wholly, any fishing industry related business (for example, other wholesale establishments which sell fresh fish, retail establishments, processing plants, fish houses, fishing boats)? Yes \_\_\_\_\_ No \_\_\_\_\_
 

If so:

  - a. What type of business is it, location and date of ownership?
  - b. Have these business expansions come through acquisition or merger of a previously on-going business or through a new business start?

Type of Business	Location	Year	Type of Expansion

Section II. Business Activities

## A. Operations

1. Of your total wholesale revenue from fresh fish, what percentage is constituted by the cost of fresh fish? \_\_\_\_\_

If you are unable to obtain this information for fresh fish, use data expressed as a percentage of total wholesale revenue. (Indicate which revenue base is used.)

2. Describe the various marketing services you perform to account for the gross margin you must add to the price you pay for fresh fish. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. This question concerns trends taking place in the marketing services performed by fresh fish wholesalers.

a. What marketing services, if any, are you not performing today which you were performing in 1960? Describe them and explain why this came about. If there are none, write NONE. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

b. What marketing services, if any, are you performing today which are different from, or in addition to, those you were performing in 1960? Describe them and explain why this came about. If there are none, write NONE.

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4. Do you provide promotional assistance of any kind (advertising advice, promotional aids, plans, point-of-purchase displays, etc.) to your customers? If so, what. If not, write NONE.

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5. Do you operate a retail fresh fish counter? Yes \_\_\_\_\_ No \_\_\_\_\_  
If so, list the total tonnage sold and its total wholesale value. \_\_\_\_\_ lbs. \$ \_\_\_\_\_ wholesale value.

B. Purchases

1. How many suppliers of fresh fish do you buy from during a period of one year? \_\_\_\_\_
2. List the names, location, and tonnage purchased from your five major Texas suppliers of fresh fish. Be sure these suppliers are located in Texas.

Name	Location	Tonnage (lbs.)

3. What was the tonnage of fresh fish purchased during 1970 from suppliers located in:

- a. The State of Texas only . . . . . pounds
- b. All states other than Texas . . . . . pounds
- c. Mexico only . . . . . . . . . pounds
- d. All foreign countries other than Mexico. . . . . . . . . pounds
- e. Total tonnage purchased in 1970 . . . . . pounds

C. Sales

1. Approximately what percentage of your total fresh fish wholesale sales is sold to customers located:

- a. In the State of Texas . . . . . percent
- b. Outside the State of Texas. . . . . percent

TOTAL	100%
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2. This question concerns information about your customers located in the following three areas, and still within the State of Texas:

Area I: Within 50 miles of your place of business.

Area II: Between 50 and 100 miles of your place of business.

Area III: Over 100 miles from your place of business.

Area IV: Any area outside the State of Texas.

Please answer 2a and 2b below for each of these areas. Place answers in the forms labeled Area I, II, III, and IV.

- a. For each of the Customer types listed in the following tables, list the number of customers to whom you sell fresh fish.
- b. For each of the Customer types, please estimate the percentage sold relative to total fresh fish sales.

Area I: Within 50 miles and located in Texas.

Customer Type	Number of Firms	Percentage of Total Sales
Wholesalers		
Retailers		
Institutions*		
Restaurants**		
Other		

\* Institutions include hospitals, schools, etc.

\*\* Restaurants include hotels, private clubs, caterers.

## Area II: Between 50 and 100 miles and located in Texas.

Customer Type	Number of Firms	Percentage of Total Sales
Wholesalers		
Retailers		
Institutions*		
Restaurants**		
Other		

\* Institutions include hospitals, schools, etc.

\*\* Restaurants include hotels, private clubs, caterers.

## Area III: Over 100 miles and located in Texas

Customer Type	Number of Firms	Percentage of Total Sales
Wholesalers		
Retailers		
Institutions*		
Restaurants**		
Other		

\* Institutions include hospitals, schools, etc.

\*\* Restaurants include hotels, private clubs, caterers.

## Area IV: Outside the State of Texas.

Customer Type	Number of Firms	Percentage of Total Sales
Wholesalers		
Retailers		
Institutions*		
Restaurants**		
Other		

\* Institutions include hospitals, schools, etc.

\*\* Restaurants include hotels, private clubs, caterers.

Section III. Business Relations.

## A. Customers

1. Do you have contractual agreements concerning the price or quantity of fresh fish sold to your customers? Yes        No         
If so, generally describe them \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## B. Suppliers

1. Assuming the price asked for and quantity offered of fresh fish is identical among all potential suppliers, what business relationships between you and them do you consider most important in your decision to continue buying their offerings? (e.g. prompt delivery, goodwill, merchandising aid, etc.) List and explain why. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Do you have contractual agreements with any fresh fish suppliers concerning the price for or quantity of fresh fish you purchase? Yes        No        If so, generally describe them.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. a. How would you describe competition among suppliers of fresh fish to solicit your purchases? (That is, would you say it is fierce, nonchalant, or passive?) \_\_\_\_\_

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b. Do you have reason to believe there are unethical competitive practices among suppliers relative to their dealings with you? Yes \_\_\_\_\_ No \_\_\_\_\_ If so, describe them.

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Section IV. Problem Areas

## A. Suppliers

1. If you could correct any three problem areas that you encounter in your dealings with your suppliers, which would you correct first? Second? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## B. Customers

1. If you could correct any three problem areas that you encounter in dealings with your customers, which would you correct first? Second? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## C. Texas Fishing Industry

1. If you had the power to do so, what changes would you make that you believe would improve the overall efficiency of the Texas fishing industry? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Do you have any comments concerning the advantages or disadvantages of cooperative organizations to the harvesters of fresh fish in Texas, or to wholesale firms such as yourself?