

# **Chinese Market Investigations of Dried Fishery Products from Alaska**

**Final Report**

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## **1. Introduction**

In recent years, because of the increased demand for fisheries products in China, many smaller companies have joined the large multinational corporations in the international trade in fishery products. Most fishery products are imported in frozen or fresh form. These materials are then processed inside China and either marketed in China or exported to other countries. As indicated in the Phase I segment of this report, some fishery materials are processed as dried, smoked, and pickled products. These products have their own attraction as being highly nutritious food and have occupied stable market positions over the years.

In the present study, thirteen samples of dried fishery products from Alaska were introduced to the Chinese market. These investigations were conducted in the following cities: Beijing, Dalian, Qingdao, Shanghai, and Guangzhou. In order to gain the most accurate information, international traders, supermarkets, and consumers were investigated in a comprehensive manner.

## **2. The investigations in the selected cities**

### **2.1 Dalian**

Liaoning and Shandong are the main provinces in China involved with the importing and exporting of fishery products. Dalian is the largest and most important harbor in Liaoning Province. Therefore, the findings from the Dalian investigation provide a good indication of the marketing pattern for dried fishery products in the entire province. Table 1 shows the prices of thirteen product samples as estimated by international traders, supermarkets, and consumers in Dalian.

**Table 1 The estimated prices of thirteen samples given by international traders, supermarkets and consumers**

Samples	International traders		Supermarkets		Consumer accepted price (USD/kg)
	Retail price (USD/kg)	C & F price (USD/ton)	Retail price (USD/kg)	Wholesale price (USD/kg)	
Smoked & Dried salmon Bits	4.8-8.4	3,500-8,000	4.8-9.6	3.6-6.0	7.5-13.0
Dried salmon	6.0-9.6	4,000-7,000	6.0-9.6	4.8-9.0	4.8-9.6
Dried scallop	10.8-15.7	9,000-15,000	4.8-9.6	2.4—7.2	6.9-12.1
Dried pollock	4.8-9.6	5,000-7,000	4.8-9.6	4.8-7.2	7.2-9.6
Deep water “candied” fish	4.8-9.6	3,500-5,500	4.8-9.6	1.8-3.7	6.5-10.8
Dried octopus	8.4-13.3	5,000-11,000	4.8-9.0	3.3-6.0	4.8-7.0
Dried shark fin	72.3-132.5	30,000-75,000	60.2-120.5	51.2-84.3	60.2-120.5
Dried squid	72-24.2	3,500-8,000	9.6-24.1	6.0-19.3	8.4-18.1
Dried herring	1.4-3.4	700-1,200	1.8-3.0	1.2-2.4	2.4-3.6
Dried croaker	8.4-14.4	7,000-10,000	6.6-14.4	5.4-13.4	4.8-12.1
Dried flounder	4.8-12.1	4,500-12,800	8.4-24.1	6.7-21.9	6.0-8.4
Dried mackerel	-	-	1.8-2.4	1.2-1.8	-
Dried Skatewings	4.8-12.1	800-1,446	4.8-12.0	4.0-10.8	8.4-14.5

Fig 1. The C & F price variations estimated by international traders of Dalian for several products(USD/Ton)

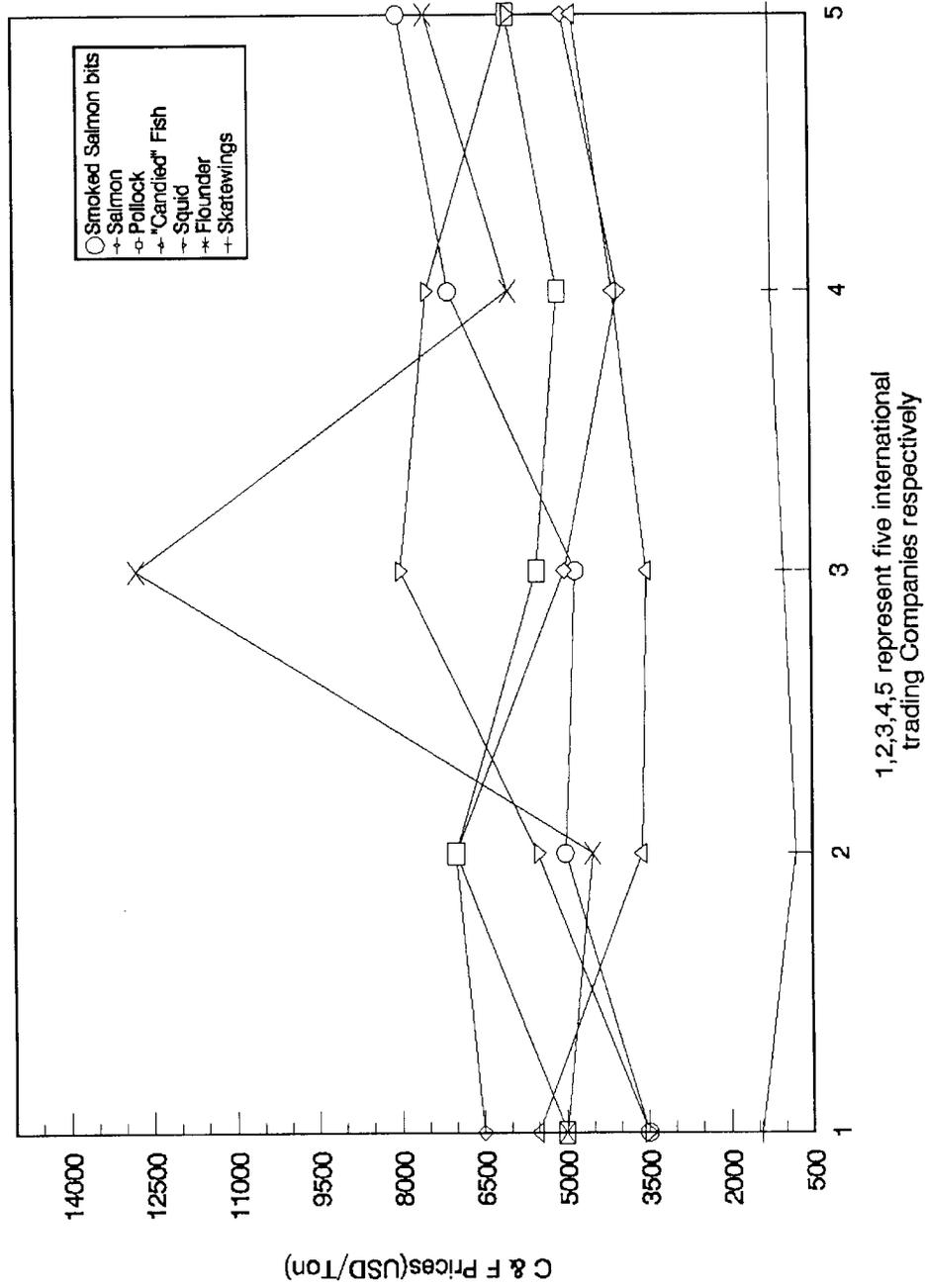
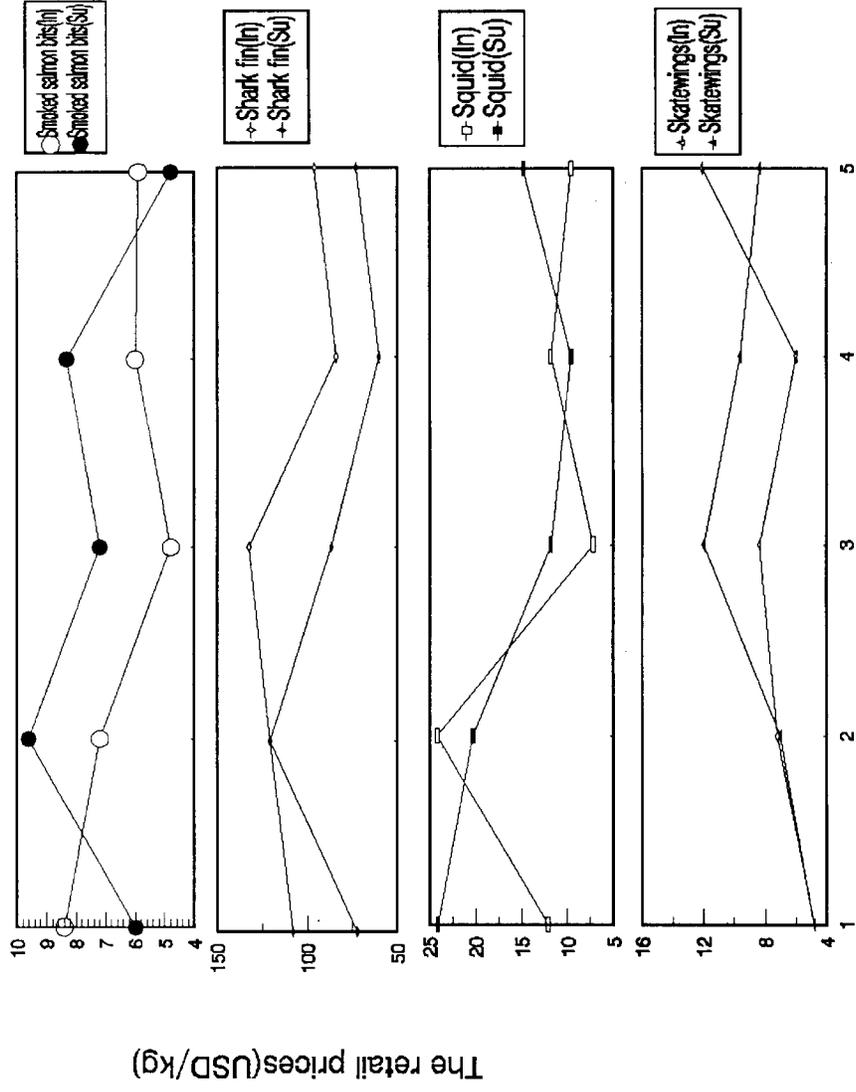


Fig 2. Comparing the retail prices(USD/kg) given by international traders with the retail prices given by supermarkets of Dalian



1,2,3,4,5 represent different international traders and supermarkets respectively (In--International traders;Su--Supermarkets)

As indicated in Table 1, the prices provided for a single product can vary over a large range. The price variations obtained for several products are illustrated in Figure 1. These findings indicated that it is very difficult for an investigator to estimate the price for new products. This task is made particularly difficult if the investigator does not know the production cost. Regardless, the estimates for new product prices are based upon market knowledge and consumer preferences.

Figure 2 provides a picture of the estimated retail prices for several products. The estimated retail prices are illustrated in pairs to better compare the data provided by international traders with the data received from supermarkets. There is considerable variation in the price ranges given by international traders and supermarkets.

The acceptable prices provided by the consumers of Dalian are shown in Table 1. The results of investigations tell us that most consumers in Dalian prefer ready-to-eat products sold in small packages. These consumers usually emphasize the nutritional, appearance, and taste characteristics of a product and consider shark fin, skate wings, scallops, flounders, and smoked and dried salmon, including smoked salmon bits, to be highly nutritious foods.

Some of the new products being considered in this investigation are quite attractive, but there are still some problems with the samples. It was mentioned by the international traders, supermarkets, and consumers that some of the products, such as dried salmon and dried pollock, are too dry to prepare for eating. All of the new products under investigation, with the exception of smoked and dried salmon bits, herring, mackerel, and deep water "candied" fish, are very dry. The moisture contents of the products are much lower than similar products currently being marketed in China. Even though the low

moisture content will increase the shelf life of the products, the texture is too hard and will not be easily accepted by Chinese consumers.

Secondly, as indicated in the Phase I report, most products sold in small packages in Chinese markets are ready-to-eat products. The people investigated still had some biases concerning the packages even though it was explained that the packages will be changed to satisfy consumer requirements.

Thirdly, some new products, which were dried only and not spiced, should be salted and presented as a head-on whole fish or head-off whole fish. If products such as dried salmon are presented as small pieces, the Chinese consumer may misunderstand the nature of the products and think that they are made from processing remnants. Therefore, if the products are to be marketed only in dried and salted form, they should be processed as gutted whole fish or in certain larger sizes.

In addition, the technology for processing specific products should be improved. The dried octopus products, for example, are chewy, and there is no available treatment that can be used by a consumer to alter their texture. These products need to be shredded before they can be consumed. The results of our investigation indicate that consumers view dried shark fins as highly nutritious food, however, this product should be marketed in a skin off form. Also, since consumers may be purchasing any of these products as gifts, the quality and design of the package are also very important considerations.

**Table 2 The estimated prices of thirteen samples given by international traders, supermarkets and consumers in Qingdao**

Samples	International traders		Supermarkets		Consumer accepted price (USD/kg)
	Retail price (USD/kg)	C & F price (USD/ton)	Retail price (USD/kg)	Wholesale price (USD/kg)	
Smoked & Dried salmon Bits	4.8-8.4	4,000-8,500	3.2-8.4	2.4-3.2	4.3-8.6
Dried salmon	6.0-9.6	3,600-7,000	4.8-9.6	3.6-7.2	4.8-9.6
Dried scallop	12.1-14.4	7,000-18,000	13.3-24.1	12.1-19.3	3.6-8.4
Dried pollock	4.8-12.1	6,000-12,000	4.8-12.1	7.2-9.6	4.8-12.0
Deep water "candied" fish	7.2-9.6	4,000-8,000	5.5-14.5	8.4-12.1	6.5-17.3
Dried octopus	8.4-12.1	6,000-10,000	9.6-12.1	7.2-9.6	4.8-7.2
Dried shark fin	66.2-132.5	40,000-60,000	60.2-121.0	38.6-84.3	18.0-70.2
Dried squid	7.2-25.3	6,000-18,000	7.2-12.1	6.0-9.6	3.6-14.4
Dried herring	1.7-2.9	800-1,500	2.4-3.6	1.9-2.4	2.4-9.6
Dried croaker	8.4-16.7	7,000-14,000	2.2-9.6	1.7-7.2	4.8-9.6
Dried flounder	6.0-16.9	5,000-12,000	9.6-24.1	7.2-18.1	3.6-13.2
Dried mackerel	-	-	-	-	-
Dried Skatewings	4.8-12.1	6,000-10,000	6.0-12.1	7.2-12.1	6.0-12.1

The prices for dried shark fins estimated by the individual buyers differ widely. It is said that the price for large shark fins will be much higher than that for small-sized fins. The appearance of this product and the processing technology used in its preparation are also important factors that will affect retail prices. Similar products in Dalian markets are numerous and attractive and the fact must be kept in mind that international traders are concerned with making profits. Consequently, the delivered cost of the product will be the most important factor that affects the marketing of a new product. Since these kinds of products are nutritious and consumers usually buy them as gifts, it is important to remember that people will be less likely to haggle over the price as long as the product looks good and has a nice taste.

## **2.2 Qingdao**

Qingdao is the largest and most important harbor in Shandong Province. Table 2 indicates the estimated prices for the thirteen new sample products. These estimates were provided by international traders, supermarkets, and consumers in Qingdao. As shown on Table 2, the retail prices given by international traders and supermarkets have similar ranges. Almost all the people investigated feel that it is very difficult to estimate the prices for a product if the cost of production is unknown. Therefore, the prices given vary considerably among individuals.

Figure 3 shows the price variations obtained from international traders in Qingdao for several of the new products. As predicted, the estimated prices fluctuate widely. The reasons for these fluctuations are as follows:

- The people who provided the price estimates did not know the production costs.
- Except for frozen whole or gutted fish, most of the international traders have not previously imported processed fishery products.
- The small-sized packages of the samples made it more difficult for these individuals to estimate market price.

These investigations were carried out with about ten international trading companies. Some of these traders were not interested in several of the products. They did not provide estimates for these samples, although they did provide some market trend information for them. However, several other products were quite attractive. These especially attractive products include dried squid, dried flounder, deep water "candied" fish, and smoked salmon bits. The delivered prices for these products must be low, otherwise, it will be necessary to process the products inside China and import the raw materials. Labor costs in China are low.

In addition, the technologies for processing the new products should be altered. For example, smoked and dried salmon bits will be much more popular if the taste was made lighter. Some of the new products, such as dried croaker, dried salmon, and dried skate wings, do not have the same appearance as products processed in China. In the Chinese market, skate is usually gutted, salted, and dried as a whole fish. In addition, since salmon are quite large and difficult to dry as whole fish, they might be dried as fillets. This specific product must be salted before drying, as well.

Again, the responses from the international traders, supermarkets and consumers in Qingdao indicate that all of the products except herring, mackerel, deep water "candied" fish, and smoked salmon bits are too dry to be successfully marketed as dried and salted

Fig 3. The C&F price variations estimated by international traders of Qingdao for several products(USD/Ton)

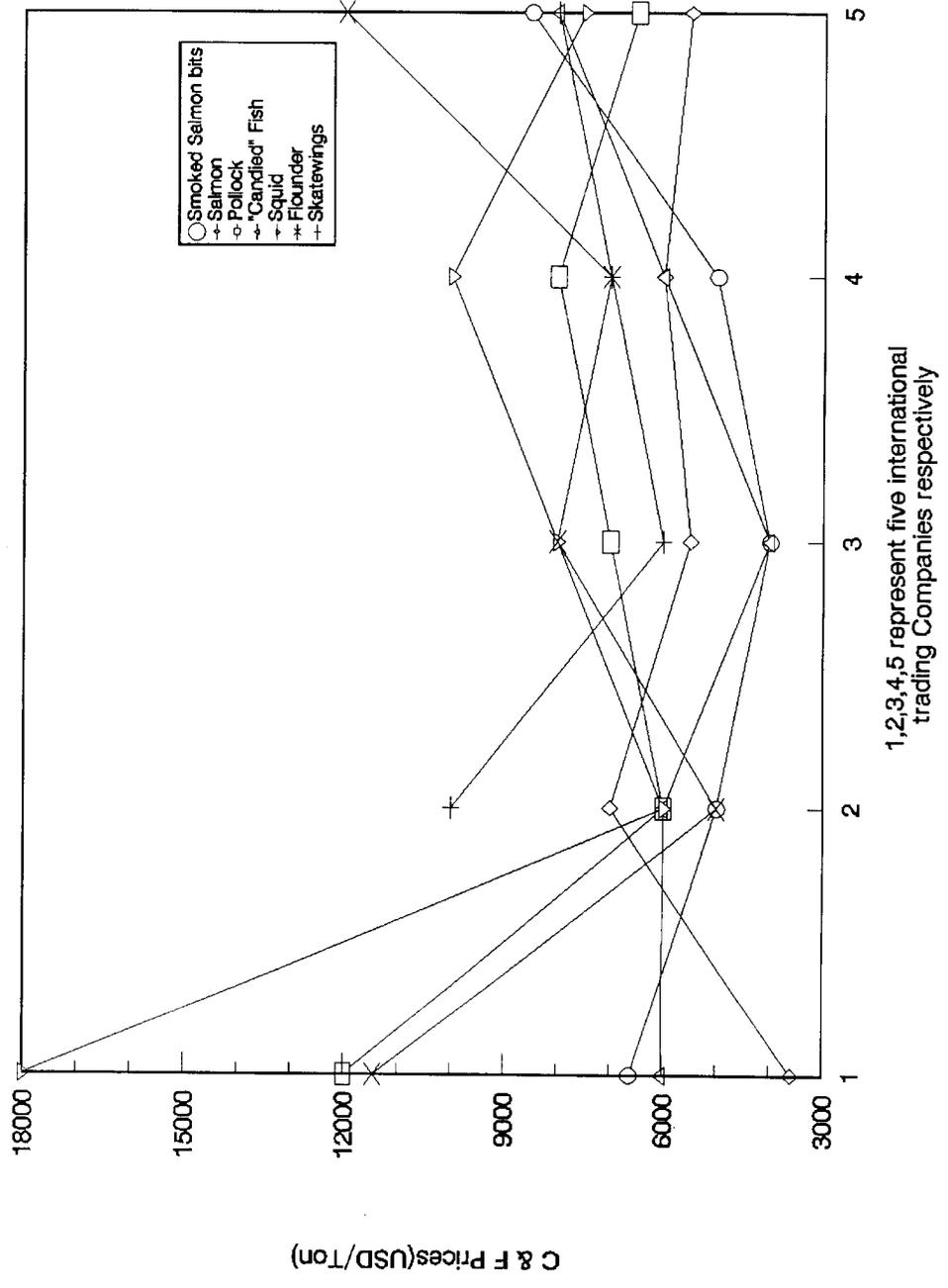
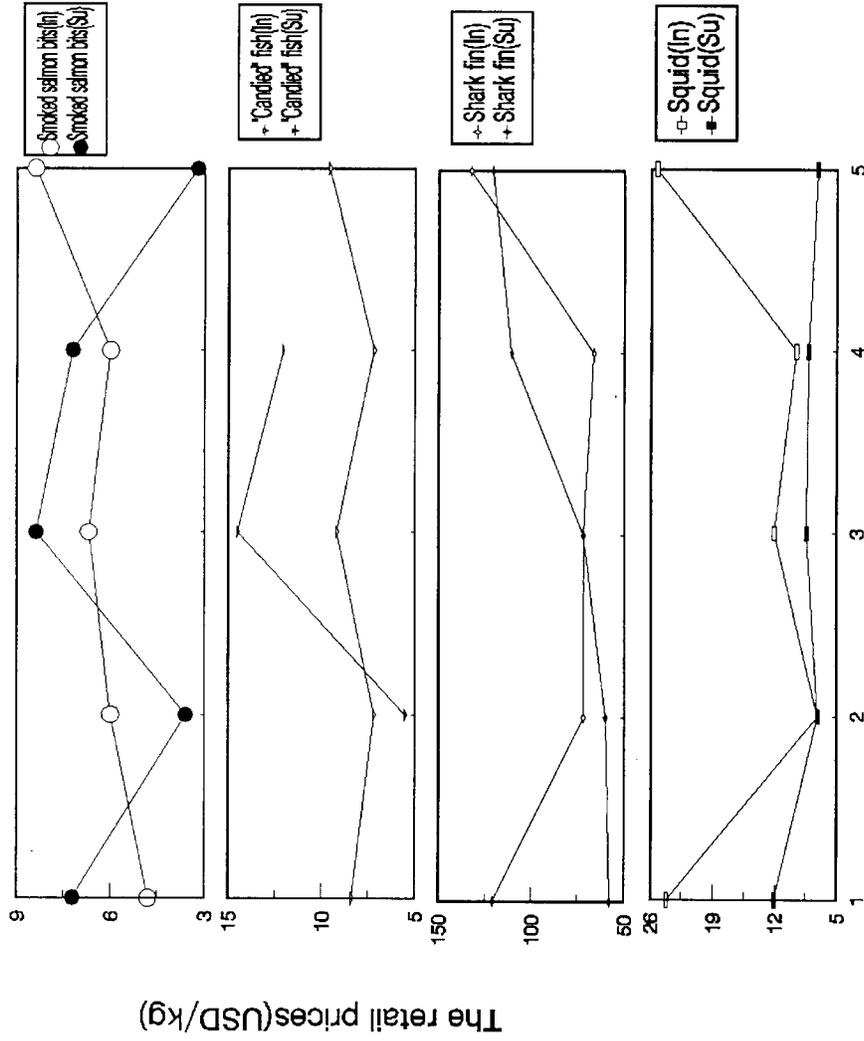


Fig 4. Comparing the retail prices(USD/kg) given by international traders with the retail prices given by supermarkets of Qingdao



1,2,3,4,5 represent different international traders and supermarkets respectively (In--International traders; Su--Supermarkets)

products. The textures of the ready-to-eat products should be soft or crisp. Only then will these new products be accepted by Chinese consumers.

The resulting prices estimated by international traders and supermarkets for several products are compared in Figure 4. As shown in this figure, the prices given by various individuals are quite different. The surveys indicated to us that the price at which a product usually retails includes the following costs:

- customs duty (1)
- harbor dues (2)
- transportation costs (3)
- storage costs (4)
- regional and local distribution costs (5)

Therefore the retail price should be presented as follows:

- Retail price = (1)+(2)+(3)+(4)+(5) + the production cost + 20-30% profit

The prices acceptable to the consumer are also illustrated in Table 2. These prices have been estimated by sampling randomly selected consumers. These consumers come from different income and age groups. A most important factor that will influence the market success of any of the new product is that the consumer “accepted price” must be similar to or higher than the posted retail price. Most of the accepted price ranges provided by consumers are quite similar to the retail prices estimated by the international traders and supermarkets except for those for dried shark fin, croaker, and octopus. However, the consumers investigated also provided some suggestions for improving the products. These suggestions are detailed in Section 4.

### **2.3 Shanghai**

Shanghai is the largest harbor in China and has a population of 13,490,000 people. Consequently, the investigations of Shanghai are very important to this project and its new products. Table 3 depicts the results of the investigations involving eleven samples of new products from Alaska. It should be noted from Table 3 that the consumer accepted prices are lower than the retail prices estimated by international traders and supermarkets. This is a good indication that people in Shanghai do not prefer the new products. These investigations also showed that few consumers have any interest in dried herring. People surveyed provided the opinion that this type of product cannot be marketed in this city.

Furthermore, neither the supermarkets nor the consumers have a preference for the dried salmon and dried scallop. The fact should be pointed out that the dried salmon is very dry and hard. As mentioned with a previous product, this could give consumers the impression that this new product may be processed from processing “disposals” or remnants. Information provided by international traders indicated that as long as the scallop are dried using Chinese processes, this product will be marketable in Shanghai. Another product, skate wings, also may not have a market in Shanghai. This particular product would have to be marketed in the inland cities. The international traders at Shanghai also stated that this product should be dried as a gutted whole fish.

It should be noted that the international traders and supermarkets in Shanghai are very interested in dried shark fin. With respect to the Alaska product sent to China, the technology for processing shark fin should be improved. First the shark fins must be skinned. Second, the size of the fin and the product package are also very important.

Different fin sizes will command significantly different prices. The main demand for shark fin comes from hotels and restaurants. Currently, shark fin are being imported into China.

Dried squid will have a market in Shanghai, as predicted by international traders.

However, the tastes of "candied" fish and smoked salmon bits are not favorable. These new products can be improved by modifying processing to accommodate the tastes of the local consumer population. Of course, if the taste of these products is attractive, then the consumer accepted prices will be higher.

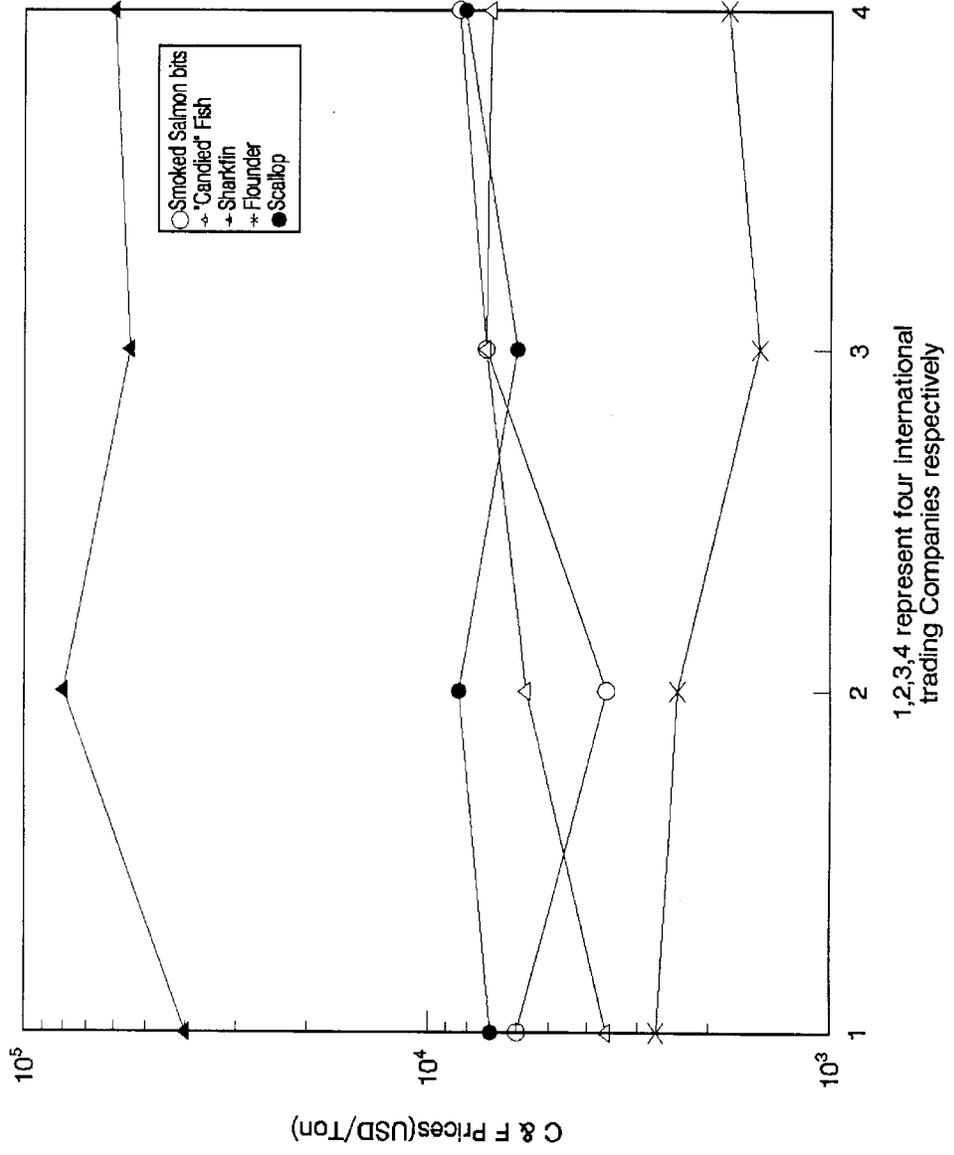
Figure 5 gives the C & F prices as evaluated by the international traders of Shanghai for several products. As shown on Figure 5, the estimated C & F prices exhibit considerable fluctuation. For example, the highest price for shark fin is US\$80,000/ton, while the lowest price shown is US\$40,000/ton. For dried flounder, the estimated prices are much lower; in the range of US\$2,700-1,500.

The retail prices estimated by international traders and supermarkets in Shanghai for several products are compared in Figure 6. As can be seen, the retail prices for smoked salmon bits estimated by international traders and supermarkets are quite similar. However, the prices for shark fins vary widely. This indicates that shark fin is not usually consumed by the common consumer. The international traders also gave relatively higher prices for scallop than the supermarkets. This situation can be improved if the technology for processing the product is improved. In contrast to the above statements, the estimated price for flounder provided by the supermarkets is higher than that given by the international traders.

**Table 3 The estimated prices of eleven samples given by international traders, supermarkets and consumers in Shanghai**

Samples	International traders		Supermarkets		Consumer accepted price (USD/kg)
	Retail price (USD/kg)	C & F price (USD/ton)	Retail price (USD/kg)	Wholesale price (USD/kg)	
Smoked & Dried salmon Bits	6.0-10.1	3,600-8,400	6.0-9.6	4.8-6.0	2.4-3.6
Dried salmon	6.0-12.1	-	-	-	-
Dried scallop	7.0-18.1	6,000-8,400	4.8-9.6	-	-
Dried pollock	-	-	-	-	-
Deep water “candied” fish	6.0-14.2	3,600-7,200	4.8-12.1	4.8-8.4	1.92-3.0
Dried octopus	5.2-8.4	-	4.0-6.0	3.2-4.8	2.4-7.2
Dried shark fin	40-110	40,000-80,000	4.8-48.0	3.6-36	6.0-7.2
Dried squid	4.8-12.1	3,000-3,500	4.8-9.6	3.6-8.4	2.4-7.2
Dried herring	-	-	-	-	-
Dried flounder	1.93-2.4	1,500-2,700	3.0-6.0	3.0-5.2	4.8-6.0
Dried Skatewings	-	-	2.4-4.8	1.9-3.6	1.2-7.2

Fig 5. The C&F price variations estimated by international traders of Shanghai for several products(USD/Ton)



## **2.4 Beijing**

Beijing is the capital of China and is one of the largest cities in China. Table 4 illustrates the data for the eleven products investigated in Beijing. It is the prediction of the international traders in Beijing that some of the new products will be marketable in this major city. These products are smoked salmon bits, scallop, "candied" fish, octopus, squid, and shark fin. The other products will have some marketing difficulties in Beijing.

People in Beijing would like to buy ready-to-eat products. In terms of fishery products, the people in this city usually prefer to buy fresh or frozen items. However, some dried products have quite stable markets. These include several "highly nutritious" products such as dried sea cucumber, shark fin, dried shrimp, and several others. It should be pointed out that shark fin is a welcomed product, particularly in hotels and restaurants. Shark fin can be marketed as long as it is processed using Chinese processing technology: skin off and packaged as a high quality and expensive product.

The supermarkets provided wholesale prices that were usually 30% less than retail prices. Supermarkets usually make profits in the range of 20-30% on fishery products. The consumer accepted prices were obtained by investigating over twenty consumers from different income and age groups. A common comment made by this consumer sample is that the present textures of most of the new products should be changed. These comments will be detailed in Section 4.

## **2.5 Guangzhou**

Guangzhou is a well-developed city. Average incomes of working people are higher than those in other cities. The project investigations in this city involved the sampling of over

twenty international traders. However, only a small amount of data was collected from consumers because the people were busy with their work and some of them were not interested in the new products. The estimated prices of thirteen samples provided by the international traders, supermarkets, and consumers in Guangzhou are shown on Table 5.

Some views provided by the international traders of Guangzhou indicated that the new products will have some marketing difficulties in China because the retail prices may be high and the product taste is often different. It should be pointed out that people in Guangzhou do prefer lighter tastes for ready-to-eat products and that they do like salted and dried fishery products, as well. Regional consumers prefer items such as dried croaker and flounder as long as they are processed like similar products processed in China. The appearance and form of the herring, mackerel, and skate wing samples from Alaska are very different from similar products made in China. Salmon, scallops, octopus, and shark fin all have the same general problems as expressed by the supermarkets and consumers - they should be processed in the same way as similar products made in China. For example, octopus is better processed as a soft or crisp form for the ready-to-eat market. The other products that consumers are most interested in are smoked salmon bits, "candied" fish, and dried squid. Market acceptance will be much better if the taste of smoked salmon bits and "candied" fish can be made lighter.

As is the pattern elsewhere, wholesale prices are about 30% less than retail prices. However, the retail prices given by the international traders and supermarkets differ widely. This indicates that the estimations should only be used as general references for the products. There are also several other factors that will affect the development of markets for these new products. These factors include advertisements, training programs for sales promotions, and the introductions presented on the packages, among others.

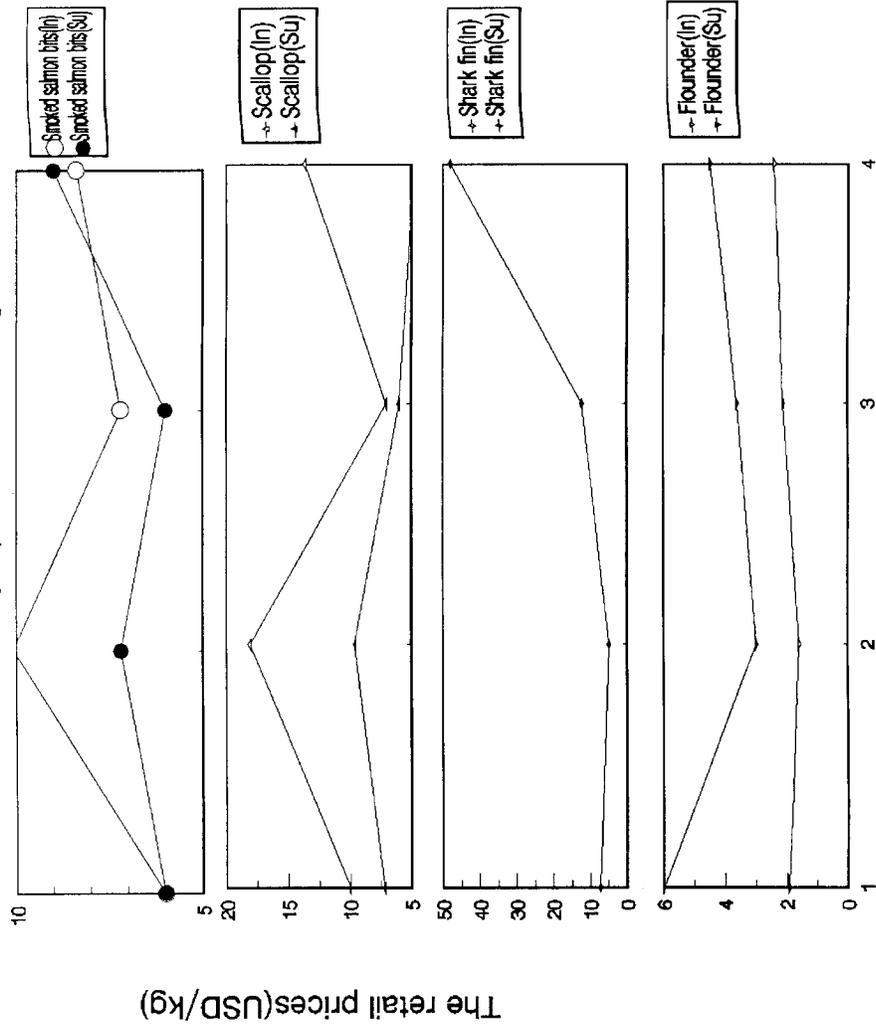
**Table 4 The estimated prices of eleven samples given by international traders, supermarkets and consumers in Beijing**

Samples	International traders		Supermarkets		Consumer accepted price (USD/kg)
	Retail price (USD/kg)	C & F price (USD/ton)	Retail price (USD/kg)	Wholesale price (USD/kg)	
Smoked & Dried salmon Bits	9.6-13.5	8,000-10,000	3.6-7.2	2.4-4.3	3.6-12.1
Dried salmon	8.4-10.1	7,100-7,500	1.9-5.2	1.4-3.3	2.4-3.6
Dried scallop	21.0-27.0	14,000-20,000	7.2-21.7	4.8-12.1	3.6-6.0
Dried pollock	4.8-5.1	2,000-3,800	1.8-5.1	1.2-3.2	2.4-6.0
Deep water "candied" fish	8.4-10.1	7,500-8,400	3.6-6.0	2.4-2.9	4.8-10.1
Dried octopus	10.8-12.1	6,000-8,000	2.4-4.8	1.8-3.6	12.1-16.9
Dried shark fin	17.0-20.3	15,000-21,000	12.1-21.7	8.5-15.2	18.1-28.1
Dried squid	7.8-8.1	5,000-6,000	6.0-8.4	4.6-5.1	3.6-14.5
Dried herring	3.0	1,800-2,200	1.2-2.4	1.0-2.0	1.2-3.6
Dried flounder	6.0-6.8	4,800-5,500	3.6-9.6	2.5-6.7	2.4-3.6-
Dried Skatewings	2.7-12.1	2,000-2,400	1.8-2.8	1.5-2.0	1.5-3.0

**Table 5 The estimated prices of thirteen samples given by international traders, supermarkets and consumers in Guangzhou**

Samples	International traders		Supermarkets		Consumer accepted price (USD/kg)
	Retail price (USD/kg)	C & F price (USD/ton)	Retail price (USD/kg)	Wholesale price (USD/kg)	
Smoked & Dried salmon Bits	4.8-12.1	3,500-4,000	7.8-14.5	4.5-6.0	6.0-12.1
Dried salmon	2.4-10.8	-	10.1-14.6	7.1-10.2	-
Dried scallop	4.8-7.2	3,000-5,000	-	-	6.0-9.6
Dried pollock	4.8-7.2	3,000-5,000	6.0-12.1	4.2-9.0	2.4-3.6
Deep water “candied” fish	7.2-9.6	4,600-6,000	2.4-4.8	1.7-3.4	3.6-7.2
Dried octopus	2.4-6.0	1,670-4,000	5.6-13.2	3.9-9.2	-
Dried shark fin	27.2-54.4	14,000-30,000	-	-	-
Dried squid	7.2-12.1	3,600-6,000	7.8-14.5	5.5-10.1	7.2-12.1
Dried herring	-	-	-	-	2.4-5.4
Dried croaker	19.2-24.1	10,000-15,000	9.6-12.1	6.7-8.5	6.0-13.2
Dried flounder	5.8-7.7	3,000-5,000	4.2-9.6	2.9-8.5	3.6-6.0
Dried mackerel	-	-	-	-	-
Dried Skatewings	-	-	21.7-24.1	15.2-16.9	12.1-18.0

Fig 6. Comparing the retail prices(USD/kg) estimated by international traders with the retail prices estimated by supermarkets of Shanghai



1,2,3,4,5 represent different international traders and supermarkets respectively (In--International traders;Su--Supermarkets)

### **3. Response of the Chinese market to dried fishery products produced in Alaska.**

The market investigations of the samples of the thirteen new products from Alaska indicated that some products, such as dried squid and flounder, are quite favorable to the Chinese consumer. Some other products, such as smoked salmon bits, "candied" fish, shark fin, scallop, and octopus could gain a position in the market if they can be improved in terms of their taste, appearance, processing technology used, and packaging. Several of the remaining products can be marketed in selected areas. Several of these new products, such as skate wings, are preferred in cities in northern China. Dried croaker may be preferred by the consumers in southern China. Since the appearances of the products are different from similar products processed in China, herring and mackerel did not receive good prospective findings from these investigations.

As shown on Tables 1, 2, 3, 4, and 5, the prices for specific products are very different when estimated by individuals in different Chinese cities. As previously reported, it is difficult for marketers to estimate product price if they do not know the production cost. Also, the evaluations may be affected by the price of similar products processed in China, personal experience and preferences, and additional costs incurred after the products are imported into China.

#### **3.1 Preferences of international traders, supermarkets and consumers in different cities**

Each consumer has a personal opinion about dried products. All the people investigated showed a common interest in dried squid and flounder. However, some individuals in Guangzhou pointed out that appearances of flounder should be improved. Their concern

was that the product looked too dry and seemed to have very little meat on it. The investigation also indicated that the taste of the ready-to-eat products, such as smoked salmon bits and "candied" fish, should be less smoky for the former and less sweet and oily for the latter product.

The technologies for processing dried salmon, scallops, pollock, octopus, and shark fins should be improved. The results of surveys indicate to us that these products would have markets in China if the appearances and texture of the products were made more attractive. In terms of their appearance, the look of the skate wings from Alaska differs from similar products made in China. This makes it difficult for investigators to obtain data and other information about this particular product. This product is usually processed as a gutted whole fish. Regardless, this could be just the beginning of a new market in China for dried skate wings presented as pieces. It should be noted that products like this are usually salted before drying.

Almost all the people investigated mentioned that the dried salmon, pollock, flounder, and skate wings are too dry and the texture is too hard for easy preparation and cooking. People will not be inclined to buy them because of their appearance. Special attention should be given to dried salmon. In northern China, traditional salted salmon is marketed in the form of fillets or gutted whole fish. This type of product maintains a stable position in the marketplace. Traditional salted salmon processed in China has a high moisture content. Consumers like the taste of this product.

### **3.2 Price variations from city-to-city**

Figures 7, 8, 9, and 10 indicate the price ranges of squid, flounder, shark fins, and smoked salmon bits as estimated by the international traders in different cities.

Fig 7. The estimated C&F price ranges of dried squid by international traders at different cities

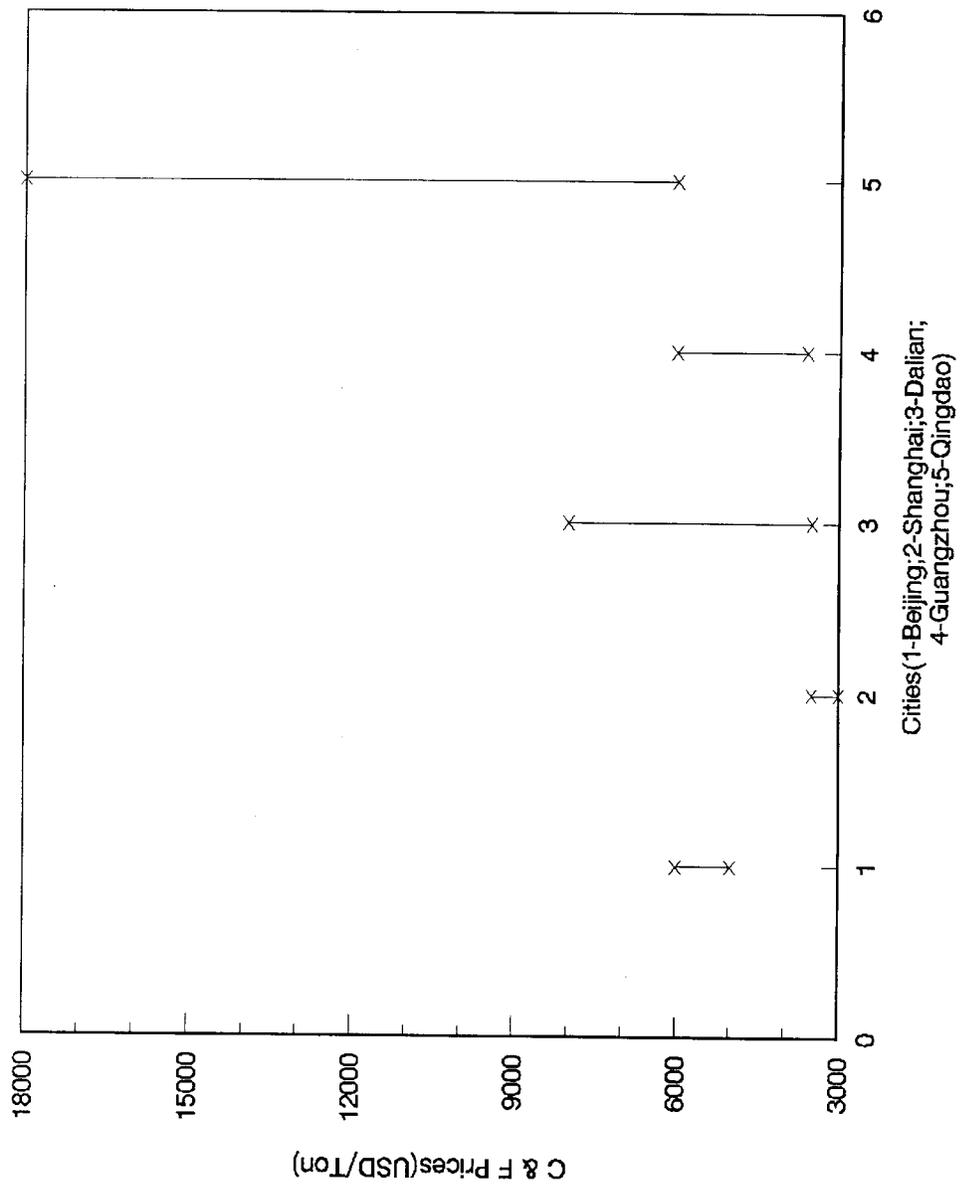


Fig 8. The estimated C&F price ranges of dried flounder by international traders at different cities

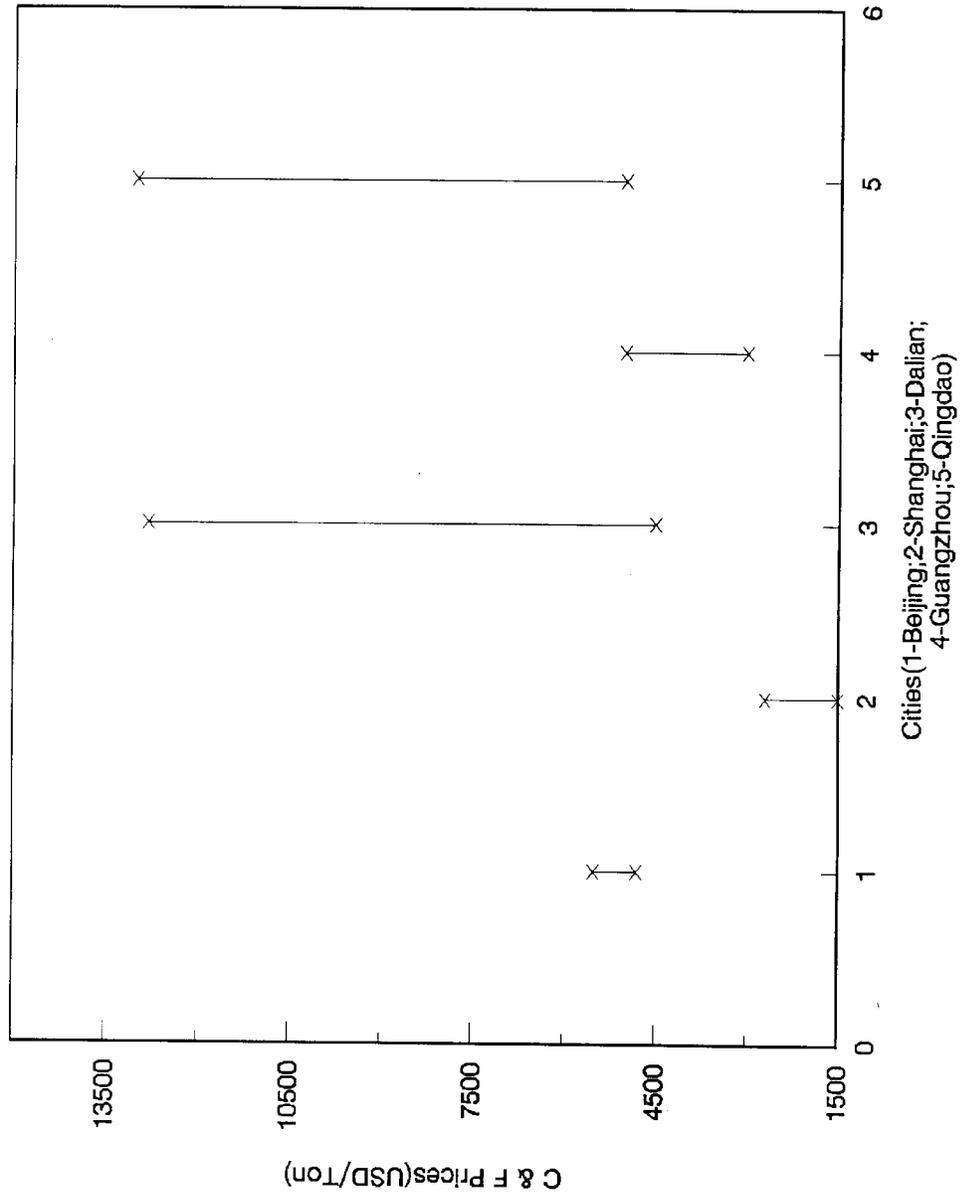


Fig 9. The estimated C&F price ranges of dried shark fin by international traders at different cities

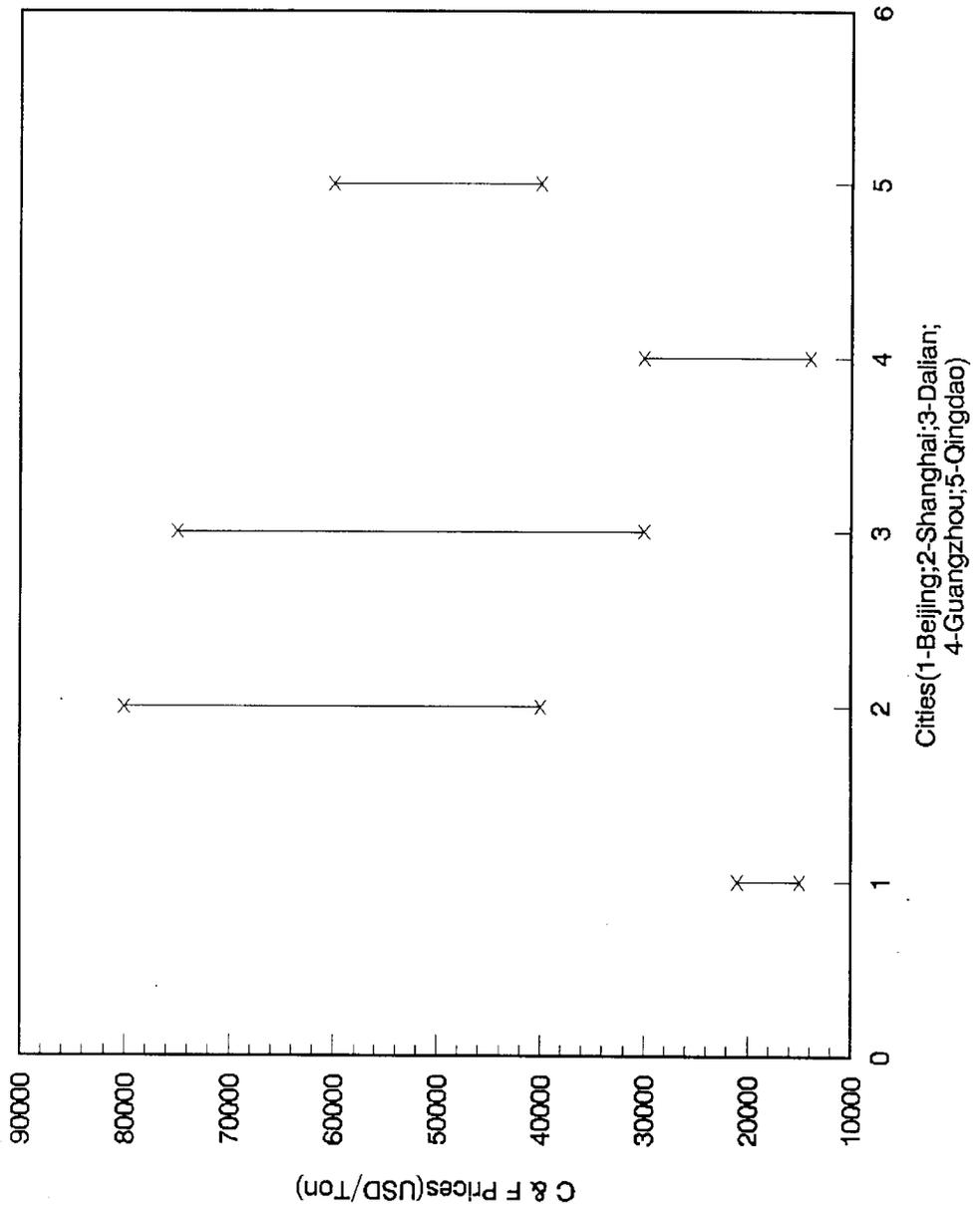
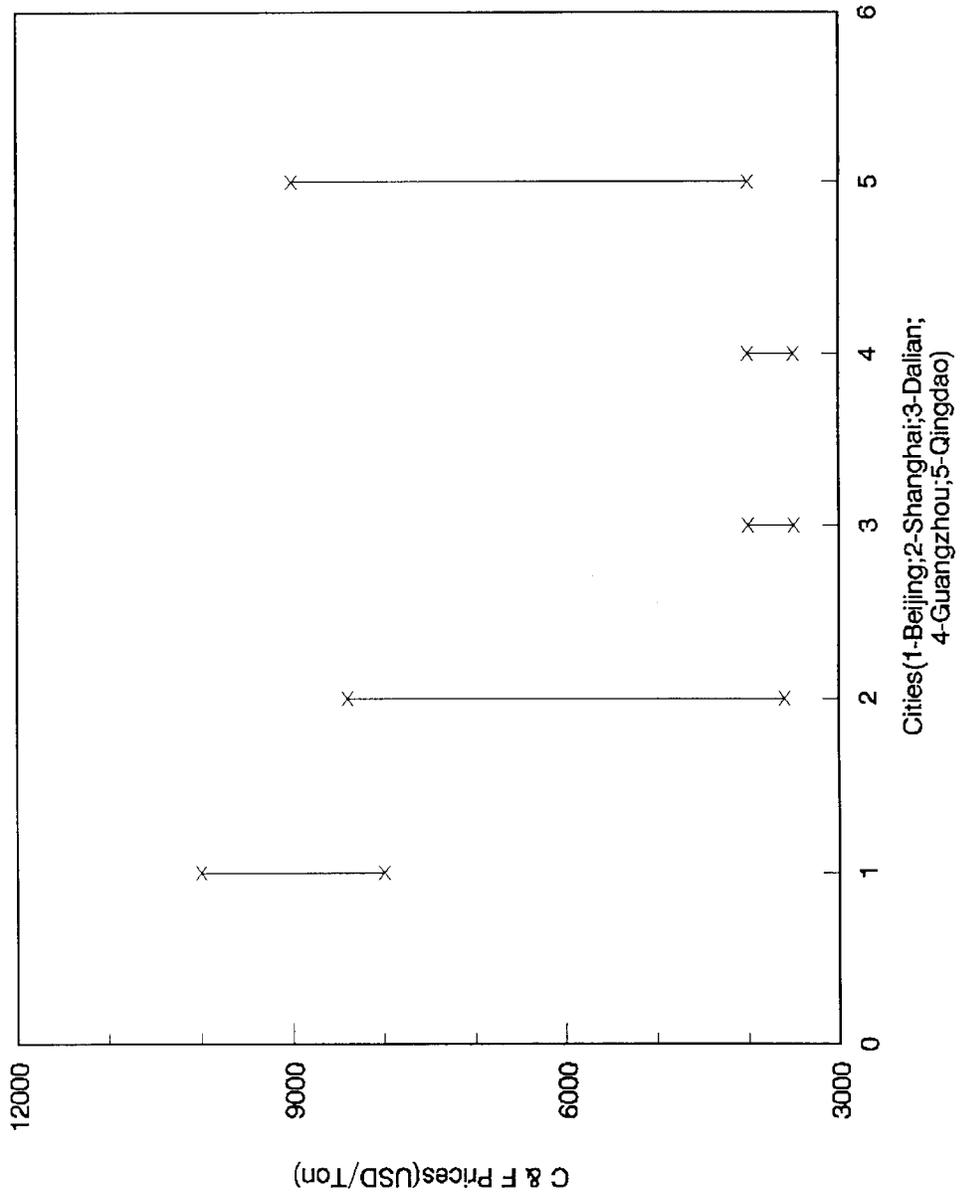


Fig 10. The estimated C&F price ranges of dried and smoked salmon bits by international traders at different cities



As shown in the figures, the price variation for individual products is large. For example, the international traders in Qingdao gave the highest C&F prices for dried squid while the traders in Shanghai gave the lowest. For dried flounder, the international traders from Shanghai again gave the lowest estimated price. The estimates given by the traders in Qingdao and in Dalian are quite similar.

Consumers in Shanghai showed the highest preference for the dried shark fin, and, not surprisingly, the traders from this city provided the highest estimate, as well. It is clear that there is no common price for dried shark fin in the five cities investigated. The lowest and highest prices shown in Figure 9 are US\$15,000/ton and US\$80,000/ton.

International traders in Beijing gave the highest price estimate for the smoked and dried salmon bits product, while the price estimated by the international traders in Guangzhou is the lowest for this product. The reason for that is probably because people in Guangzhou favor lightly-flavored products. These consumers also mentioned that the color of the product was too dark and that the smoky flavor of the product was too heavy.

Also, as mentioned previously, the cost of doing business in China from importing to retailing includes a number of variables. An important element is the customs duty which is about 30% of the product value for the fishery products. Also included in the determination of product costs are harbor dues, transportation costs, storage, and distribution costs (Section 2.2).

Figures 11 and 12 illustrate the retail prices for "candied" fish and skate wings in supermarkets at different cities. The prices given for these products fluctuated in quite a wide range. This fluctuation mainly relates to consumer preferences, eating habits, and the experiences with the retail prices of similar products processed in China.

The consumer accepted prices for “candied” fish and smoked and dried salmon bits as evaluated by consumers at different cities are shown in Figures 13 and 14. The price ranges are wide. The reasons for this wide range are consumer preferences, income status, and experience with similar products in the market. For both smoked salmon bits and “candied” fish, consumers in Shanghai gave the lowest estimated prices. This indicates that these consumers place a good amount of stress on their preferred tastes and the appearance of the products.

### **3.3 Concerns of the international traders, supermarkets, and consumers**

The concerns of the international traders involve primarily the problem of how to make money in the seafood trade. Presently, importing raw materials and completing all of the processing steps inside China will be the best way to reduce production cost and also to improve the flavor of the products.

Managers of supermarkets are concerned with the need to purchase inexpensive yet attractive products - this decision being based on both the appearance and taste of the products. This purchasing decision is also very close to the concern of consumers. The price, taste, and texture of a product are the most important factors that determine the purchasing behavior of consumers. However, these purchasing patterns can vary between individuals. Some consumers are not particularly concerned about the cost of a product as long as it is highly nutritious and tastes good. As a general rule, most Chinese consumers are concerned about all the factors mentioned above. Therefore, all a successful product really needs are low cost, attractive flavor, texture, and proper packaging.

Fig 11. The estimated retail price ranges of "candied" fish by supermarkets at different cities

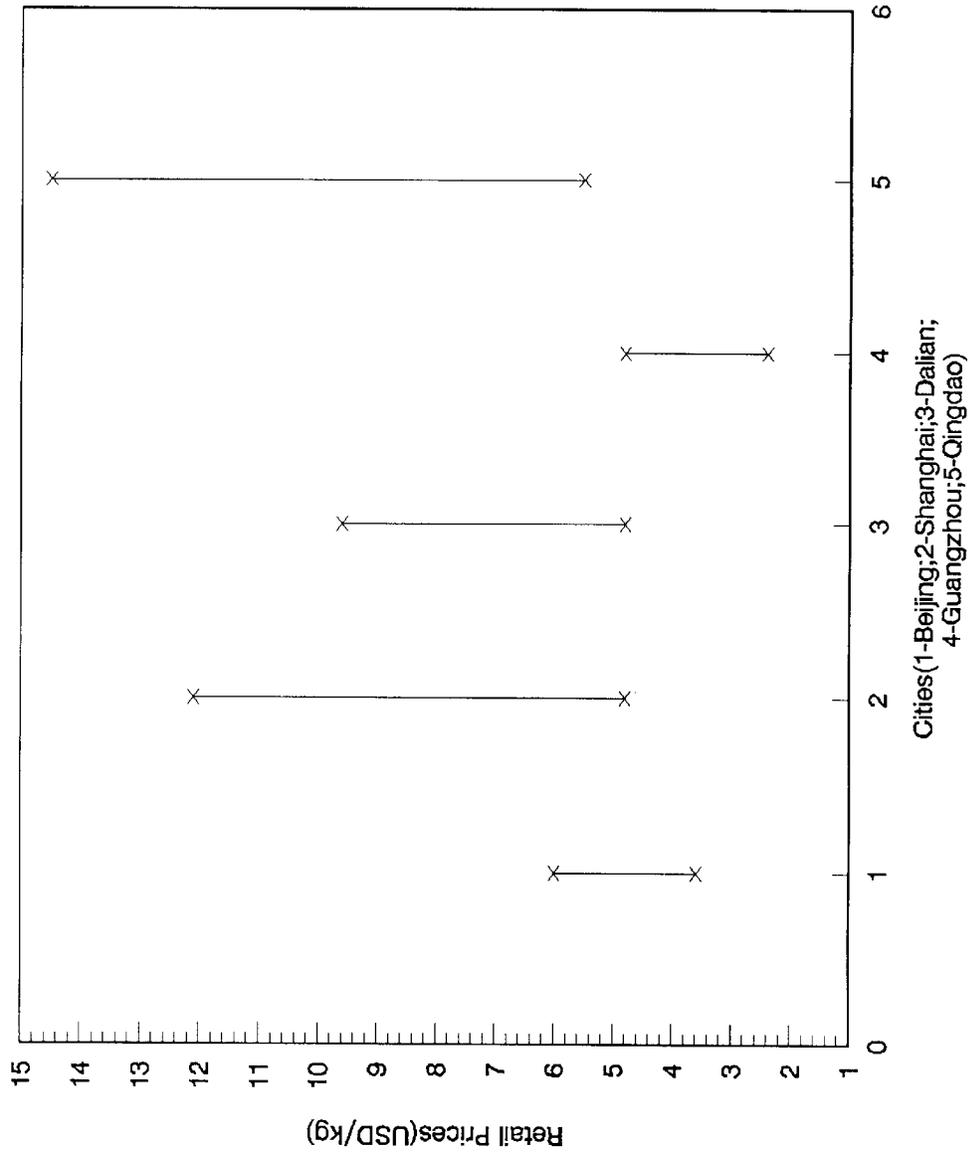


Fig 12. The estimated retail price ranges of dried skatewings by supermarkets at different cities

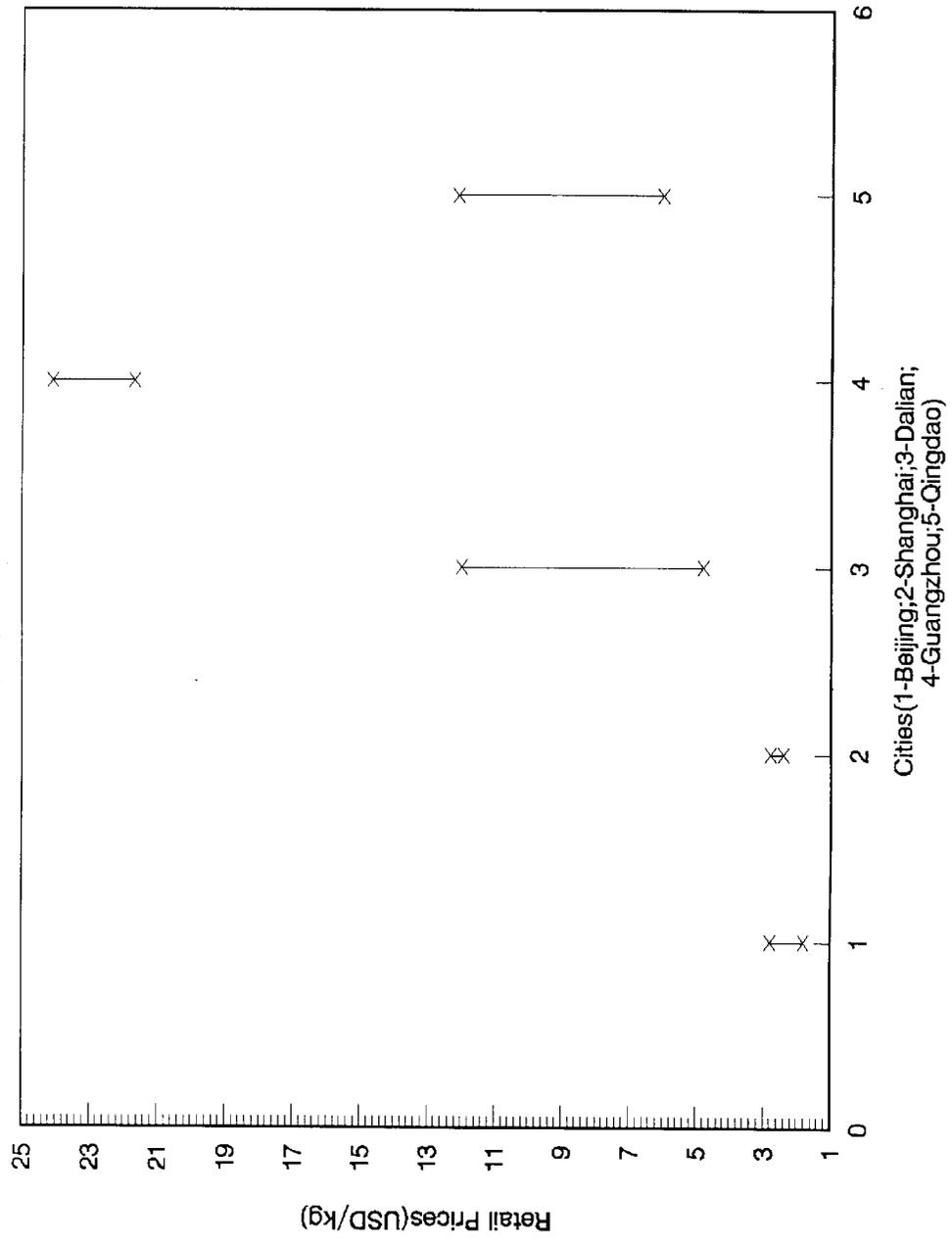


Fig 13. The accepted price ranges of dried and smoked salmon bits estimated by consumers at different cities

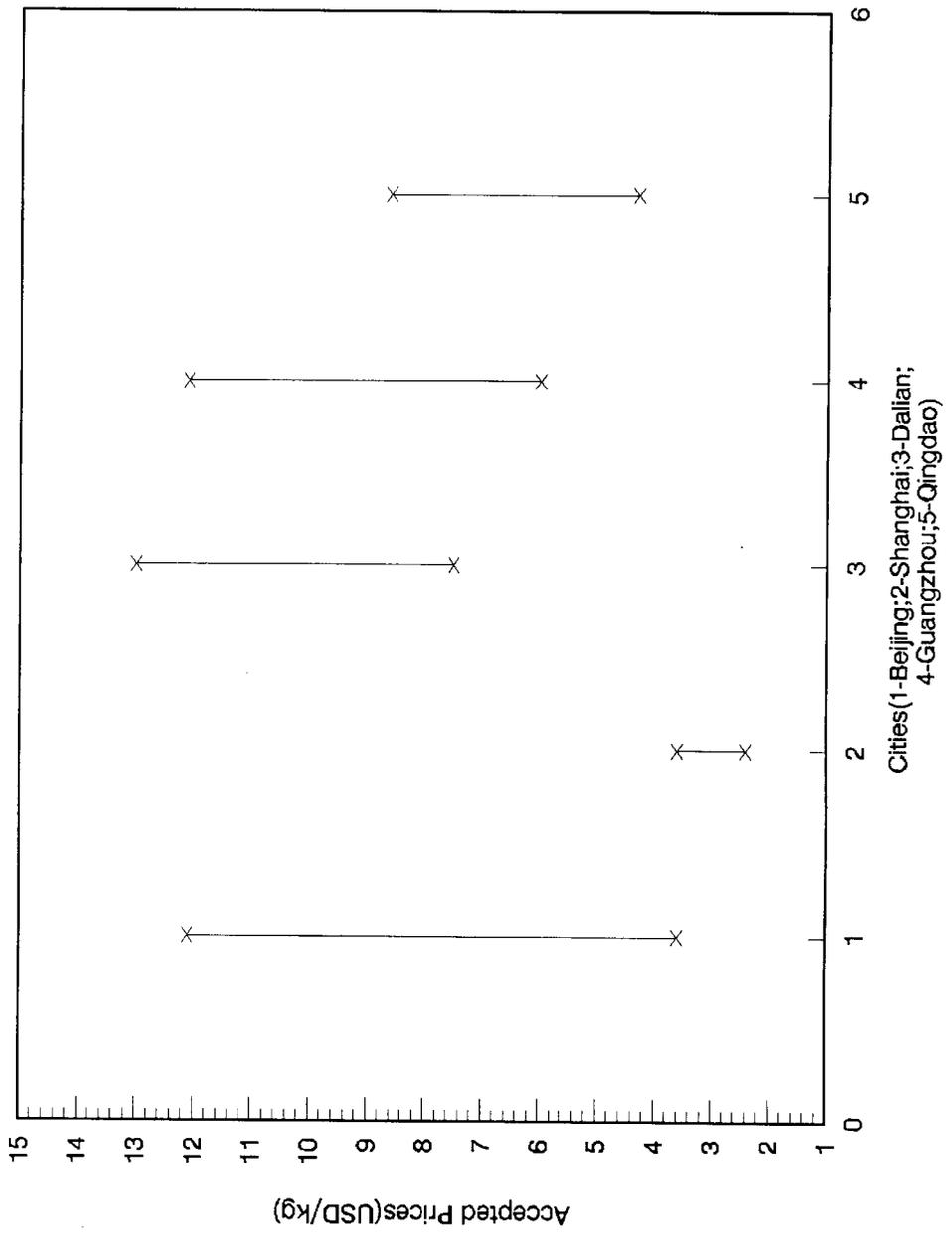
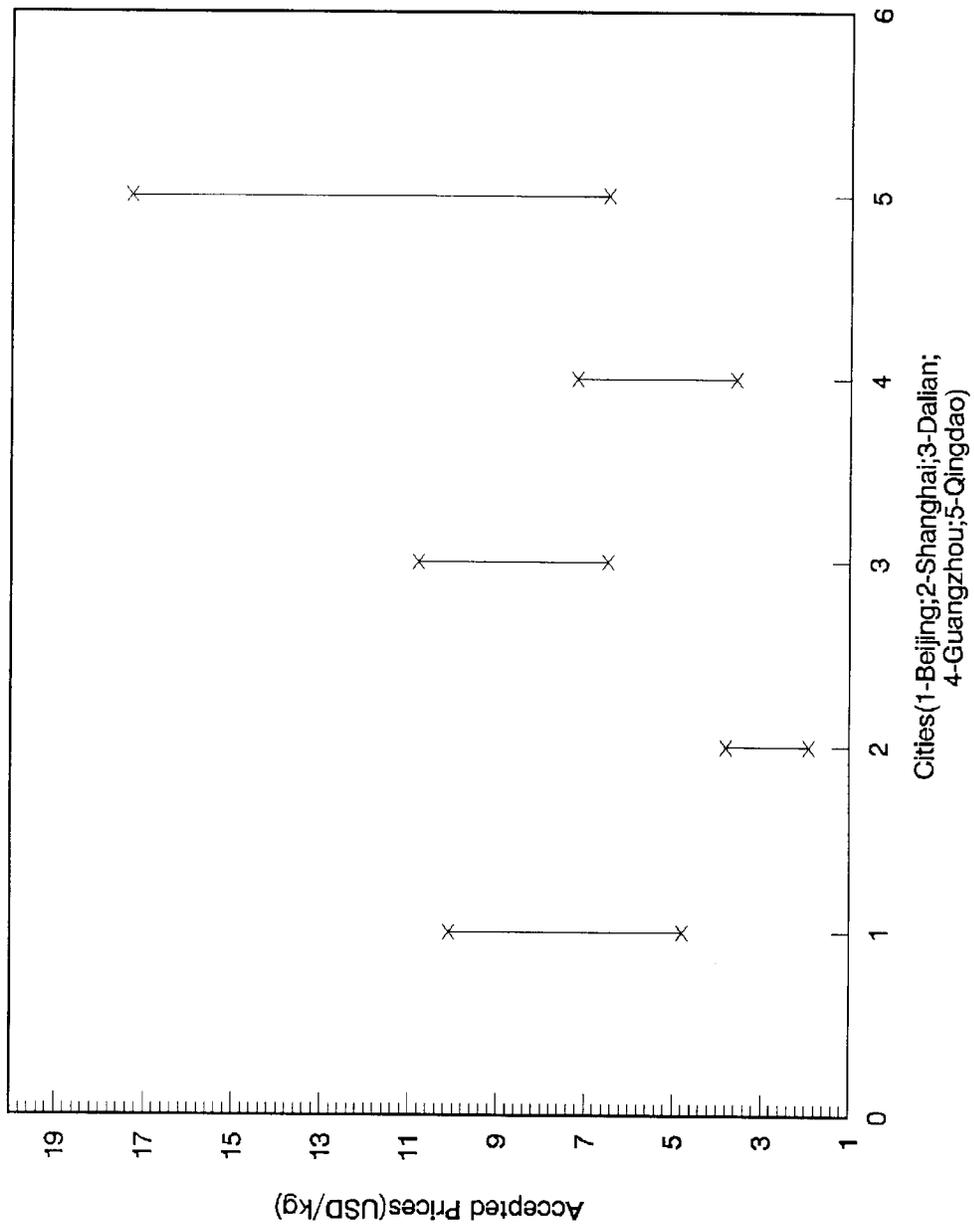


Fig 14. The accepted price ranges of "candied" fish estimated consumers at different cities



#### **4. Suggestions concerning the development of Alaskan dried fishery products to be marketed in China.**

##### **4.1 Reducing the production cost**

Since Chinese labor is quite inexpensive, the single best means to reduce the cost of the new products is to import raw material and complete the processing steps inside China. Most of the international traders suggested this idea and also mentioned that, up to now, there have been very few processed fishery products imported into China except for frozen products. In addition, processing the products in China can shorten the storage time of the products.

##### **4.2 Selecting the right product forms and packaging**

For most species, only salted and dried products are commonly packaged in large quantities. In terms of this survey, the small packages are preferred and understood by the people investigated. For the ready-to-eat products, the package should be small and contain approximately 20-100 grams per bag. The appearance of the products can also stimulate market activities.

##### **4.3 Flavors and the textures suitable for Chinese consumers**

The products should be carefully processed in order to create the tastes and textures required by the Chinese consumer. Most of the new products from Alaska presented for these investigations are too dry and hard. These negative characteristics make the products less attractive, although the shelflife may be longer. Usually, products like skate and pollock are salted and dried with a moisture content in the range of about 10-18%. The

ready-to-eat products are mostly processed to have the soft or crisp textures.

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