

FISHING INDUSTRY RESEARCH AND DEVELOPMENT COUNCIL

National Seafood Consumption Study:

**Trade Supplies to the Public for Out-Of-Home Consumption
(Caterers, 'Restaurants' and 'Take-aways')**

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1. Summary

This report represents one part of a National Seafood Consumption Study commissioned by the Fishing Industry Research and Development Council (FIRDC). The principal objectives of this Study were to collect relevant statistics on current fish and seafood consumption in Australia, including data on consumer attitudes, with the purpose of determining a range of market enhancement options.

This report focuses on data and attitudes gathered from those segments of the fishing industry considered to supply fish and seafood primarily for consumption by the public outside the home (ie Trade/Out-Of-Home report). (Separate reports cover a review of the recent literature on the local and global fishing industry, a review of perceptions held by leaders in the local industry, qualitative investigations with 'focus groups', a report on data and attitudes from those segments of the industry which supply fish and seafood primarily for consumption by the public in the home (ie Trade/In-Home reports). Furthermore, these investigations are complemented with data and attitudes offered by consumers themselves on their in-home and out-of-home consumption of fish and seafood.)

This Trade/Out-Of-Home report draws on interviews with three trade segments, ie

- caterers (contract caterers, function caterers, and in-house catering by organisations)
- 'restaurants' (restaurants, social and sporting clubs, hotels and motels)
- 'take-away' outlets (fish and chip shops, and other take-away outlets mainly selling cooked product).

The methodology of the study employed a Literature Review, Industry Leader Interviews and Focus Discussion Groups to identify major issues and approaches. The resulting questionnaires were tested in a pilot study and modified as required before the main study was undertaken. Two samples of interviewees were selected and interviewed face to face during separate survey times in 1991, so as to collect data of possible seasonal relevance. The total number of businesses surveyed across both surveys comprised 101 caterers, 202 'restaurants' and 149 'take-away' outlets. Businesses were drawn from the five mainland State capitals and Hobart on the basis of national business demographics.

Interviews were successful at identifying personnel with the required level of knowledge and responsibility in these businesses; at least 90% of respondents held senior executive positions (manager, director, owner, partner, executive chef, chief cook, etc).

The level of independence in all three segments was high in terms of autonomy over buying decisions on fish and seafood; around 80% or more of respondents were not part of any buying group, and bought for their outlet alone.

The three segments shared many common attitudes. In discussing problems with selling fish and seafood the most frequent assertion from caterers, 'restaurants' and 'take-away' outlets was that there were no problems. Aspects of price (it is too expensive, and the impact of price fluctuations on business management) were also a major common problem, as were the tendency of fish and seafood to "go off" quickly and doubts about its freshness.

A quantitative study on the degree of significance which the out-of-home segments attached to recognised industry issues identified remarkable consensus. Caterers, 'restaurants' and 'take-aways' attached most significance to the same five issues, ie

- the price of seafood makes it too expensive to buy
- the difficulty in obtaining continuous supplies of fish and seafood at steady prices

- consumer dislike of bones in fish
- the price of fish makes it too expensive to buy
- distrust of suppliers, and the risk of buying “sight unseen”.

All three segments expressed greatest concern over the price of seafood, whereas the relative ranking of the other four issues varied. The ‘take-away’ segment also stressed the difficulty of remaining competitive due to the low margins made on fish and seafood; this issue was not offered to caterers and ‘restaurants’ for comment.

The three out-of-home segments differ in the principal species/types of finfish which they sell. Caterers and ‘restaurants’, supplying for a more formal meal occasion (presumably), sold orange roughy, snapper, hake and barramundi most frequently. ‘Take-away’ outlets sold shark, whiting and hake most frequently. The predominant form in which all three segments purchased their fish was as fillets, although restaurants favoured purchases of whole snapper; ‘take-away’ outlets also favoured purchasing snapper, flathead and flounder whole (their sixth, seventh and eighth most frequently sold fish, respectively).

Most of the fish purchased by the out-of-home segment was of Australian origin, except for significant reliance on imported hake (estimated at 80% imported by caterers and take-aways) and whiting (25% imported, for ‘take-away’ outlets).

Numerous regional differences emerged as to the species/types of fish sold through ‘take-away’ outlets. Most notably, Melbourne’s frequency of sales of snapper and whiting were above average, and hake, significantly lower than average. Sydney’s pattern was the inverse of this, with the frequency of snapper and whiting sales lower than average, and hake, higher than average (all differences significant at 99.9% confidence limits).

No statistically significant regional differences were seen for fish or seafood sales through caterers or 'restaurants'. There was considerable similarity between caterers, 'restaurants' and 'take-away' outlets regarding their most frequently sold seafood items; prawns, oysters and scallops were common in all three segments, with 'take-away' outlets citing seafood sticks as their second most frequently sold seafood item. Purchases of seafood by the three out-of-home segments were commonly as the 'whole' form, and the reliance on imported produce was generally higher than for finfish.

'Take-away' outlets showed strong regional differences over the sales of some species/types of seafood; for example, Melbourne's frequency of sales of scallops was above average, whereas Melbourne's sales of prawns and Sydney's sales of seafood sticks were less than average. Significant differences in the sale of particular species through the two major categories of outlets were also established. Thus, the frequency of sales of orange roughy, oyster, and prawns was above average through fish and chip shops, and significantly lower than average through 'other' take-away outlets. 'Other' take-away outlets were found to sell hake, imported crumbed prawn cutlets, seafood sticks or no seafood more frequently than average. Conversely, fish and chip shops sold these same items at a lower than average frequency.

Considering the weight lots of fish and seafood purchased by these segments (rather than frequency of sale), most purchases were in the lower weight range (ie 1 - 10kg per month per business)¹. The principal exception to this was the buying pattern of finfish by 'take-away' outlets, where purchases were frequently made in weight ranges as high as 200kg per month per business.

¹ throughout this report all weights referred to are purchased weight.

Analysis of fish and seafood purchase volumes by the out-of-home segment adds a further dimension to the popularity of particular species. For caterers, the species purchased in the greatest volume during the survey periods were hake, whiting and orange roughy; for 'restaurants', snapper, hake and barramundi; for 'take-away' outlets, the species purchased in greatest volume were shark, hake and orange roughy (including purchases for uncooked sales).

When the *finfish* purchases of all restaurants are considered as a group, a total of 27 species/types of finfish were purchased in volumes greater than 200kg in either month preceding the two surveys. The *finfish* purchases of take-aways, when grouped in the same way, also give a total of 27 species/types purchased in volumes greater than 200kg. However, the caterers' grouped purchases were only 23 species/types of finfish in volumes greater than just 100kg per month. 'Restaurants' bought a broader range of *seafood* than the other two out-of-home segments; 19 species/types were bought in volumes greater than 100kg for either month prior to the survey periods, whereas this number was 12 and 11 species/types for 'take-aways' and caterers, respectively. The volume of prawns bought by all three segments far exceeded any other seafood item, with crayfish, squid/calamari and scallops ranking next in terms of volume.

The main suppliers of fish and seafood to caterers and 'restaurants' were general wholesalers, followed by fish and seafood wholesalers/co-operatives. 'Take-away' outlets were largely reliant on general wholesalers for their supplies of seafood, but called much more evenly on general wholesalers and wholesale fish markets for supplies of finfish.

The basis upon which caterers, 'restaurants' and 'take-away' outlets selected their stock of fish and seafood showed major common elements. Popularity with customers, a fair price representing value for money, and a functional attribute (useful in a particular recipe, tasty flavour, free of bones) were the most frequently cited responses. Some of these characteristics were often associated with certain species/types, eg hake with a good price, orange roughy with taste and bonelessness, and snapper with appearance.

The principal attributes which caterers, 'restaurants' and 'take-away' outlets sought in an *ideal* supplier were identified by asking respondents to assign a qualitative score to about 20 attributes. Caterers and 'restaurants' gave priority to exactly the same selection criteria, ie

- that orders are promptly attended to
- that the supplier is honest and fair in doing business
- that the supplier's stock is under good temperature control.

These attributes of service, honesty and quality were echoed by 'take-away' outlets, except that honesty was given precedent over service.

When respondents subsequently rated their main *actual* suppliers against these same criteria, a consensus pattern emerged again. The three segments tended to be reasonably satisfied on two out of three of these attributes, but rated their suppliers less favourably on the third. Caterers and 'take-away' outlets, for example, acknowledged quality and service in their suppliers (in reverse orders), but both identified other attributes ahead of honesty. Similarly, 'restaurants' acknowledged service and honesty, but that quality product was a little wanting.

Only 'restaurants' and 'take-away' outlets were asked to comment on the features which their customers may look for in an outlet selling fish and seafood. Both these suppliers to the public perceived the customers' major selection criteria as cleanliness of the outlet and quality of product sold.

As part of its objective to improve the efficiency and effectiveness of resource allocation, the FIRDC employed this survey to explore attitudes on the potential of a range of under-utilised species (in the sense of available capacity). In the first instance, the out-of-home supply segments were asked about a number of perceived social trends, and how these related to **their** customers. Exactly the same responses came from caterers and 'restaurants', who held that customers were more health-conscious, were eating less fats and saturated oils and were purchasing more grilled (rather than fried) fish. 'Take-away' outlets confirmed a trend of less salt on food.

The eleven species perceived by the fishing industry to be under-utilised comprised seven farmed and four wild-catch species. Caterers most frequently held that the potential for increased usage of these lay with farm barramundi, farm prawns and (farm) Atlantic salmon. 'Restaurants' gave a similar overall response, except that squid (wild) substituted for farm prawns as second priority. Just as these two out-of-home segments expressed priorities within the context of their businesses, so did 'take-away' outlets; these respondents principally held that 'none' of the species had potential, but that squid and farm prawns were possibilities for increased usage. All three out-of-home segments explained their judgements on the basis of perceived popularity of the relevant species. The under-utilised species held to have the least potential was Jack mackerel (caterers and 'take-away' outlets). On a broader scale, all three segments held brighter views on the potential of the farm species by comparison with under-utilised wild-catch. Some divergence from this opinion was apparent with 'take-away' outlets, where squid, and silver trevally/skipper were favoured.

When out-of-home segments were asked what initiatives their business could take to increase their purchases and sales of fish and seafood, all three most frequently replied "none". The facility to offer fish and seafood at lower, more reasonable price levels (perhaps through "specials") was the second most frequently cited response by caterers, 'restaurants' and 'take-away' outlets.

Uniformity of opinion again emerged when respondents were asked what actions the fishing industry itself could take to increase sales of fish and seafood through their businesses. Lowering the price and variability of price of fish and seafood was the priority response, followed by a request for more advertisements, promotions and information on fish and seafood. The third most frequently suggested industry initiative by the out-of-home supply segment was “nothing”.

A similar consistency emerged within the out-of-home segment when it was asked for a quantitative assessment of the likelihood that particular industry actions would enhance sales of fish and seafood. Three industry actions were most frequently cited by all (though with slight variations in order), as follows:

- more advertising support for fish and seafood
- guarantee of consistent supply
- greater supply and variety of Australian fish.

All segments of the out-of-home supply segment were, at best, moderately optimistic about the prospects for the sales of fish and seafood products in the next five years. 65% of caterers, 55% of ‘restaurants’ and 46% of ‘take-aways’ held the view that sales would increase over the next five years. Optimistic caterers, ‘restaurants’ and ‘take-away’ outlets alike attributed their optimism to public attention to the health benefits of fish as a regular part of our diet. Negative views on the medium term prospects for the industry were mostly associated with the perceived expense of fish and seafood.

The perceptions which caterers and ‘restaurants’ hold about fish as a protein source could have significant bearing on the selection of meals offered by them to their customers. Accordingly the perceptions held by caterers and ‘restaurants’ regarding the association of 20 or so attributes with six protein sources (meat, poultry, pork, fresh or frozen fish, canned fish and seafood, prepared fish products) were analysed.

Generally, all three fish product categories had a less favourable image than the alternative protein sources. In particular fresh or frozen fish was most commonly associated with the following negative perceptions:

- its price fluctuates too much
- it is thought likely to go off in store.

Furthermore, caterers held that, more than for any other protein source, the quality of fresh or frozen fish was likely to vary. 'Restaurants' also considered fresh or frozen fish as the most likely source to be considered too dear by their customers, and that no fish categories were well supported by advertising.

These data, attitudinal analyses and perceptions form a solid platform of market research from which to derive a series of options for the enhancement of the fish and seafood market in Australia. These market enhancement options are the subject of a separate report.

2. Summary of Methodology

The Fishing Industry Research and Development Council (FIRDC) is responsible for the funding and administration of Australian fisheries R&D, in order to improve the efficiency and effectiveness of resource application.

In 1989 the FIRDC commissioned a National Seafood Consumption Study from a consortium comprising PA Consulting Group (management and technology consultants), and Yann Campbell Hoare Wheeler (YCHW; consumer and market research consultants). Ruello & Associates provided specialist industry knowledge to the consortium.

The objectives of the study were:

- to collect detailed and meaningful statistics pertaining to present fish and seafood consumption within Australia from the retail sector, the institutional sector and all other areas
- to collect detailed statistics on consumer attitudes to fish and seafood both in the short and long term
- to determine from these statistics and survey techniques what is the Australian fish and seafood market today, and how this market might be improved both in terms of utilised and unutilised species.

Note that within this report the term 'fish' is used to refer to finfish, while 'seafood' refers to all forms of shellfish, squid, prawns, lobster, crabs, etc (marine molluscs and crustaceans).

The National Seafood Consumption Study has involved five methodological phases:

- review of literature and analysis of published statistics
- industry leader interviews
- Qualitative Investigation - focus groups (exploration of the main issues concerning the consumption of fish and seafood, knowledge of aquaculture species, etc)
- pilot *and* main in-home and out-of-home consumption study
- pilot *and* main retail, catering, wholesale and institutional studies.

The main studies have gathered data from two perspectives, ie:

- consumer purchase of fish and seafood for in-home or out-of-home consumption, and
- trade supplies to the public for either in-home or out-of-home consumption

Two 'trade' reports have been prepared, of which this is one. As shown on the next page, these reports cover the following segments of fish and seafood supply.

	Consumption	Trade Suppliers to Public
Report 1	In-home	<ul style="list-style-type: none"> • retailers (supermarkets, food stores, convenience stores) • fishmongers (outlets selling mainly “fresh” product) • wholesalers (general wholesalers, fish and seafood specific wholesalers) • warehouse withdrawals data from AC Nielsen Pty Ltd⁽¹⁾
Report 2	Out-of-home	<ul style="list-style-type: none"> • caterers (contract caterers, function caterers, and in-house catering by organisations) • “restaurants” (restaurants, social and sporting clubs, hotels and motels, selling cooked product) • 'take-away' outlets (fish and chip shops, and other 'take-away' outlets, mainly selling cooked product).

(1) The A C Nielsen warehouse withdrawals data relates to canned and frozen processed product rather than this report's emphasis on fresh and frozen fish and seafood..

A further trade report has been prepared, covering the institutional catering segment (defence forces, schools and colleges, welfare homes, hospitals and prisons). This is incorporated into the 'consumer' reports because of its data's contribution to national *per capita* consumption figures.

Seven slightly different questionnaires were developed for each of the above trade categories, seeking relevant attitudinal and numerical data. 1,254 personal interviews were conducted, 400 for wholesale and institutional sectors and 854 personal interviews with the remaining five trade supply segments. The latter were completed in the locations shown below.

	Total	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Retail (super markets/ foodstores/ convenience stores)	202	70	52	32	20	16	12
Fishmongers	200	69	51	32	20	16	12
'Take-away' outlets	149	51	38	24	15	12	9
Restaurants/ clubs/hotels/ motels	202	75	47	31	20	18	11
Caterers	101	35	26	16	10	8	6
Sub-Total	854	300	214	135	85	70	50

Prior to a final decision on the distribution of the 1,254 interviews, population figures for each segment, and sub-segments within the seven nominated segments were collected. This information enabled PA and YCHW to allocate interviews on a proportional basis within segments to ensure the collection of reliable and valid information for each segment. Attention is drawn in the reports to selected findings of statistical significance, though these references are not exhaustive.

A group of interviewers forming the interviewing team was carefully selected in each State on the basis of past experience with business-to-business studies. Actual questionnaires used in the interviews are included as Appendices (I, II and III).

Interviews were evenly split between two survey periods, ie:

15 April 1991 - 9 July 1991 (called May 1991 in reports)

9 September 1991 - 4 October 1991 (called September 1991 in reports).

This provided some insight into seasonal (autumn and spring) impact on data.

YCHW, with its expertise in market and consumer research, was responsible for data gathering, computer entry of questionnaire responses, and management and manipulation of the database. PA, with its expertise in management and strategy, was responsible for analysis and interpretation of data, and preparation of reports. Ruello & Associates provided specialist industry input.

Note that all volume data of fish and seafood shown in this report are purchase volumes as reported by the trade respondent.

Readers who want direct access to the National Consumption Study data, so as to pursue interests relevant to their particular organisation, are able to subscribe to the full database through the FIRDC.

It must be noted that although data have been collected on the basis of national business demographics, this does not make for random sampling of trade participants within the retail value chain for fish and seafood. Thus it may be misleading to attempt to use trade data to scale-up to 'whole trade segment' values.

3. Detailed Findings - Caterers

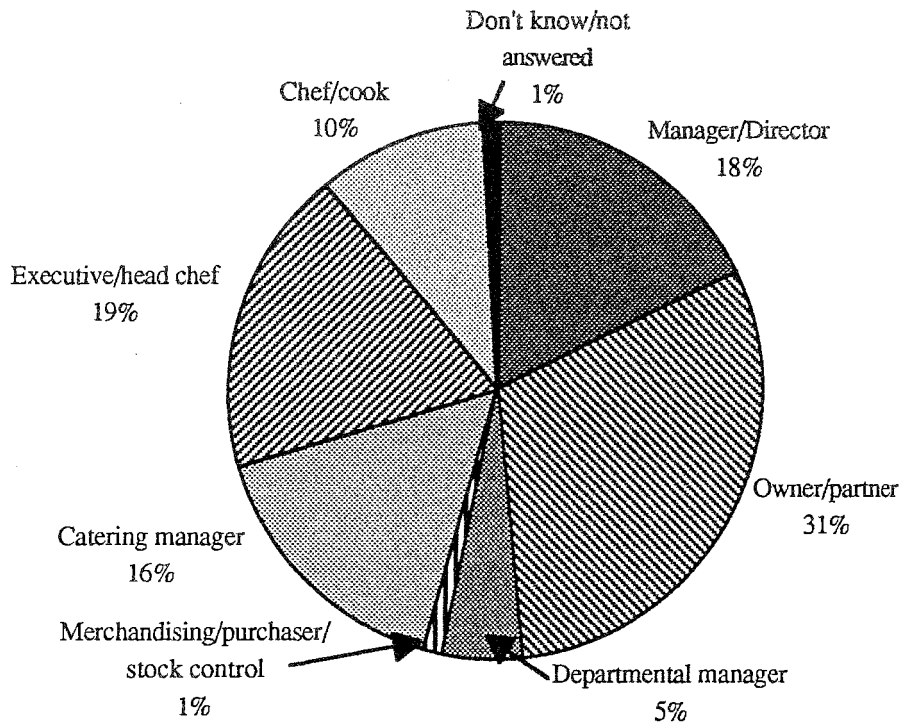
3.1 Caterer Respondents - Position and Purchasing Responsibility

The 101 respondents for the caterer study were drawn from Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart in proportion to national demographics.

About 99% of respondents held responsible positions within the catering business which enabled them to provide informed answers to the questionnaires; 49% were either manager/director or were owner/partner, while a further 45% held prime responsibility for catering and cooking (Figure 3.1.1).

All respondents were aware of all meat, fish, seafood and poultry that was bought for their catering business (Question 1b, Appendix I). Nevertheless, only 61% were the **only** person in the business involved in the decision for the purchase of fish and seafood (Question 1c, Appendix I).

Figure 3.1.1: Position of Caterer Respondents in their Business



101 respondents offered responses for May 1991 and September 1991 surveys (see Question 1a, Appendix I).

3.2 Type of Business - Initial Data

The majority of catering conducted by respondents' businesses could be described in one of four ways (Table 3.2.1). As the Table shows, the range of businesses was evenly spread across these four types.

Table 3.2.1: Relative Frequency (%) of Majority Catering Business conducted by Caterers⁽¹⁾

Catering Type	Frequency (%)
Contract catering on another business' premises	22
In-house catering by employees of business to other staff members	24
Supply of catered food that is prepared on own premises and then taken to client	30
Catering of food where clients come to your premises/business	25

(1) See Question 1d, Appendix I.

For that group of respondents who did contract catering on another business' premises (22% of respondents), their average total number of contracts operating in 1989 - 1990 was 40.5, comprising 24.3 special event contracts and 16.2 continuous contracts, on average (Question 1e, Appendix I). The most common length of a catering contract was considered by this group to be one to two years (Question 1f, Appendix I).

This same group indicated the position of influence regarding purchase of products for each contract (Table 3.2.2). Most frequently, each contract manager purchased food products from suppliers recommended by the business's head office.

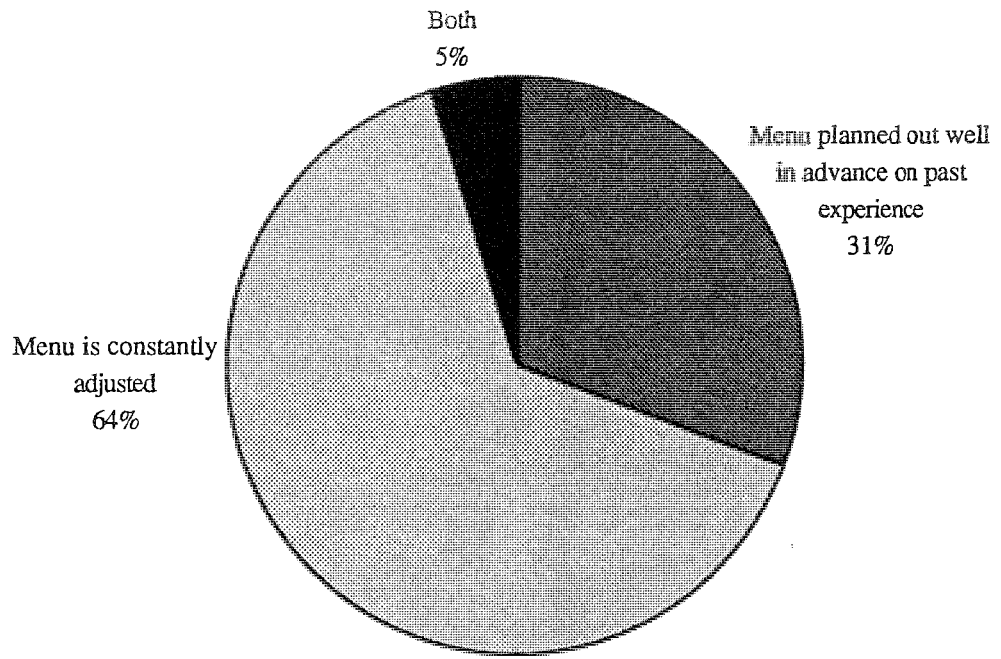
Table 3.2.2: Responsibility for Purchase of Products for each Contract⁽¹⁾: Contract Caterers

Responsibility Type	Frequency (%)
Each contract manager is free to choose the supplier of all purchased food products	30%
Each contract manager purchases food products from suppliers recommended by the business/head office	55%
Food is bought by the business (head office) and each contract manager orders food from head office	5%
Food is allocated by head office to each contract	5%
Other	5%
TOTAL	100%

(1) See Question 1g, Appendix I.

The majority of all types of caterers indicated that their menus are constantly adjusted rather than planned well in advance (Question 2a, Appendix I; Figure 3.2.1). This approach provides a possible avenue for the fishing industry to alert the catering industry to periodic opportunities arising from the availability of under-utilised species.

Figure 3.2.1: Manner in which Meals are Planned by Caterers



101 respondents for May 1991 and September 1991 surveys (see Question 2a, Appendix I)

3.3 Caterers' Perceptions of Protein Sources

Caterers were challenged on how well 22 particular statements suited a range of 6 protein sources, ie meat, pork, poultry, fresh or frozen fish, prepared fish products, canned fish and seafood; additional allowance was made for the answer that statements suited none of these protein sources, or that respondents did not know an answer. Detailed analysis of responses based on the use of correspondence analysis algorithms is given in Section 6, but several preliminary observations on the data may be made as follows:

Homogeneity of responses

In qualitative terms there are only minor differences between the responses given in the May 1991 and September 1991 surveys.

Provides a good margin to the business

Poultry was associated most frequently by caterers with providing the best margins (30% of responses). Fresh or frozen fish, canned fish and seafood and prepared fish products (13.5%, 7.1% and 6.3% of responses) were ranked below meat and pork.

Well supported by advertising

Meat was regarded as the clear leader by caterers (27.5% of responses). Fresh or frozen fish was linked to this statement by 10.8% of respondents, fewer than pork or poultry, but more than prepared fish products or canned fish and seafood.

Supply often cannot be guaranteed

Fresh or frozen fish was thought to best fit this statement (47% of responses), whereas all other protein sources **together** accounted for only 15% of responses. (37% of responses claimed the statement fitted none of the protein sources.)

Is often too expensive for the business to buy

Responses were most frequently divided between fresh and frozen fish (35.8% of responses) and “none” (34.1% of responses). Canned fish and seafood and meat were linked to this statement slightly more frequently than prepared fish products, pork or poultry.

Offers the business good value for money

Poultry was the most favoured (30% of responses). Prepared fish products and canned fish and seafood received fewest responses of the protein sources (6.8% and 7.2% respectively). Fresh or frozen fish (11.8% of responses) also ranked beneath meat and pork.

Is likely to go off and have to be thrown out

Caterers most frequently associated this with fresh or frozen fish (30.2% of responses). Poultry was the next most frequently associated protein source (15.4% of responses).

Presents a problem in waste disposal

“None” of the protein sources was most frequently cited (62.7% of responses), with fresh or frozen fish being the next most frequently associated item (12.7%).

Staff dislike preparing and cooking it

Again this was most frequently seen as applying to none of the protein sources (72.7% of responses); respondents associated the statement with canned fish and seafood (9.1% of responses) ahead of any other protein sources.

Our staff don't have the knowledge to prepare and cook it

Again, this was perceived as applying to none of the protein sources (89.6% of responses). More of the residual responses were associated with fresh or frozen fish and prepared fish products than the other four sources combined.

It takes up little storage space

Canned fish and seafood products were most frequently cited as fitting this statement (24.2% of responses). “None” was the second most favoured association (19.9%), with fresh or frozen fish third (13.7% of responses).

Is considered too dear by our customers

Again, “none” was the most frequent response but “fresh or frozen fish” was a close second (35% and 31% of responses, respectively)

It is difficult to buy in the right size portions for presentation on plates

This was most frequently seen as applying to “none” (55.6% of responses), but fresh or frozen fish was associated more frequently than any other protein source (15.4% of responses).

Preferred by more of my customers

Meat, followed by poultry received the most frequent responses here (33.9% and 27.1%, respectively). Fresh or frozen fish was the third most frequently associated protein source with this statement (19.3% responses).

It can be reused later after it has been cooked initially

Again, meat followed by poultry received the most frequent responses here (32.3% and 23.3% of responses, respectively). As a measure of the poor perception for fresh or frozen fish, prepared fish products, and canned fish and seafood against this attribute, these three protein sources **together** received fewer responses (11.6% of total responses) than the next lowest, pork (16.4%).

Our staff don't have the knowledge to buy it confidently

"None" was the clearly dominant response (65.6% of responses), with fresh or frozen fish being the next most frequently associated (10.9% of responses).

Is easily available to buy

Meat received more responses (18.7%) than any other protein source, but all were well represented, with the fewest responses going to prepared fish products (14.1%). ("None" received 0.4% of responses.)

It is easy to prepare

Again, all were well represented but poultry was most frequently associated with the statement (19.2% of responses). Fresh or frozen fish was ranked above canned fish and seafood and prepared fish products (16.8%, 14.2% and 13.7% of responses, respectively).

Suits the menu which we offer

All “fresh” sources received frequent responses, with poultry favoured just ahead of meat (21.7% and 21.4%, respectively). Fresh or frozen fish was ranked on a par with pork (18.4% and 18.2%, respectively).

Its quality varies

Meat and fresh or frozen fish were perceived as best fitting this statement (25.5% and 25% of responses, respectively).

Prices fluctuate too much

Fresh or frozen fish was cited twice as frequently (39.5% of responses) as the next nearest answer (which was “none”) on this attribute.

An essential part of the range we offer

All “fresh” materials were well represented, with meat favoured ahead of poultry (25.4% and 23.6% of responses, respectively). Fresh or frozen fish was the third most frequently associated protein source (18.7%).

Is a healthy meal

Fresh or frozen fish was the most favoured protein source on this attribute (24.1% of responses), although others (especially poultry with 22.5% of responses) were well perceived. Few respondents linked canned fish and seafood, and prepared fish products to this attribute (8.8% and 8% of responses, respectively).

Is a filling meal

Meat was most frequently perceived as a filling meal (27.4% of responses), receiving almost twice as many responses as fresh or frozen fish (14.7% of responses). Again, prepared fish products and canned fish and seafood were least frequently associated with this statement (7.5% of responses each).

Looks good on the plate

Poultry was most frequently favoured for presentation and appearance (22.4% of responses). Fresh or frozen fish was ranked ahead of meat and pork (21.6%, 20.9% and 18.7% of responses respectively), while prepared fish products and canned fish or seafood were least favoured for appearance (8.4% and 7.9%, respectively).

Suited to microwave cooking

“None” was resoundingly favoured (46% of responses), with the remaining responses fairly evenly distributed particularly amongst poultry and fresh or frozen fish (11.7% and 10.3%, respectively).

3.4 Fish and Seafood Meals - Problems

As an introduction to identifying any perceived problems, the survey first established that 94% of respondents prepared and cooked fish or seafood dishes in their business (Question 3a, Appendix I). The chief reason cited by the remaining respondents for not offering fish and seafood dishes was that there was no demand for them and that they didn't sell. Most had offered fish and seafood dishes in the past, however.

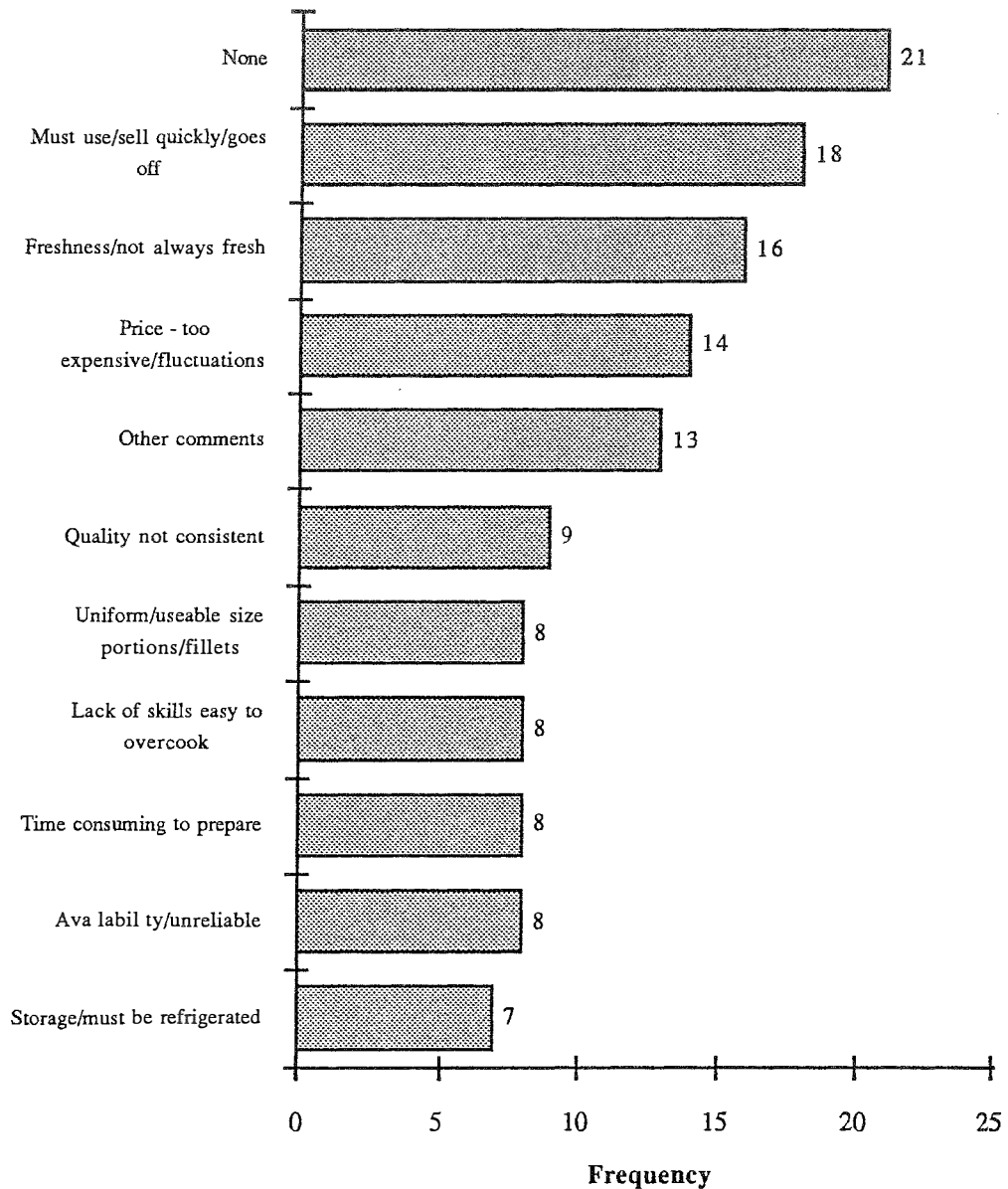
When asked to give their comments on the main problems in preparing and selling fish and seafood (Question 4a, Appendix I), the predominant response was "none" (Figure 3.4.1). The second and third most frequently cited problems related to the freshness of fish and seafood. Concern about "must use/sell quickly/goes off" reflects perceptions of the rapid deterioration of fish and the inconvenience which this causes for businesses involved in the planning, purchasing and preparation of produce for meals. "Freshness/not always fresh" reinforces these concerns, since any delay in transferring fish and seafood from catcher/producer and supplier to caterer feeds back to enhance concerns about the product "going off" before its use.

Comments that fish and seafood was either too expensive or its price fluctuated undesirably were also frequent.

Noteworthy is the observation that concerns about fish odour and bonelessness were cited only once each by respondents.

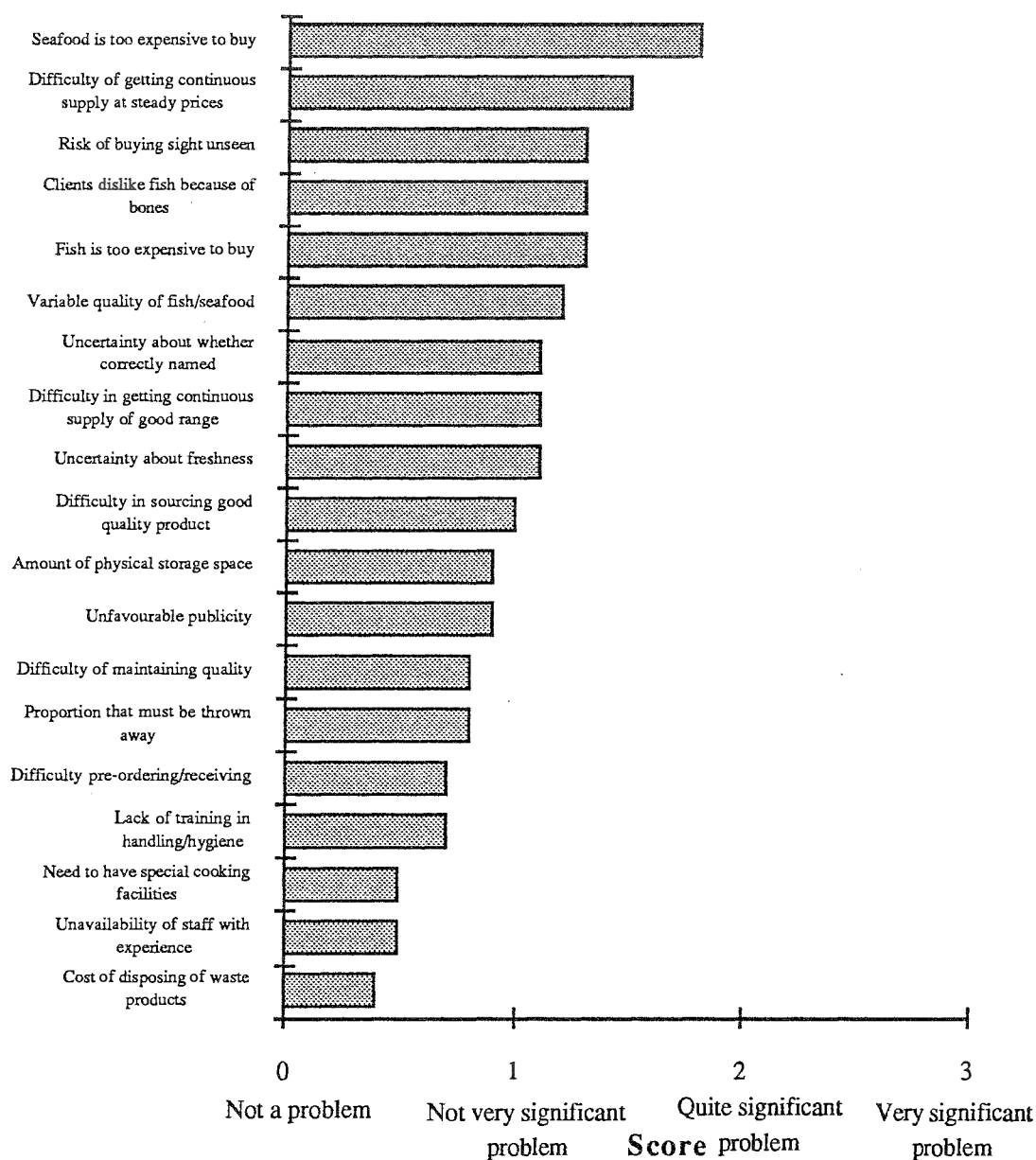
A prior phase in the study (Industry Leader Interviews) had identified a range of 19 'problems' experienced by caterers; respondents were asked (Question 4b, Appendix I) to express their views on the degree to which they saw these as being relevant to their business. Rather inconsistently with the previous data set, price emerged as the most significant problem. This was particularly the case with seafood, with fish's price being a less significant problem. Concerns raised previously about freshness (Figure 3.4.1) emerged as a perceived risk of buying fish and seafood "sight unseen". Paradoxically, problems about "clients dislike fish because of bones" rose to fourth priority (Figure 3.4.2).

Figure: 3.4.1: Caterers' Main Problems in Preparing/Selling Fish/Seafood



99 respondents offered 155 responses for May 1991 and September 1991 surveys. Only the most frequently cited 'problems', comprising 80% of all responses, are shown. A further 10 'problems' were cited less frequently (see Question 4a, Appendix I).

Figure 3.4.2: Degree of Problems Selling Fish/Seafood as a Caterer



99 respondents offered responses on each of 19 'problems' for May 1991 and September 1991 surveys (see Question 4b, Appendix I).

3.5 Fish and Seafood Sales - Types, Formats, Volumes, Origin

The eight leading types of finfish prepared and sold by caterers (see Question 5a, Appendix I) accounted for 44% of responses offered for a range of 67 finfish species or types (Table 3.5.1). Note that this list of 67 fish species/types may not be exhaustive, since respondents were asked to focus their answers on their six main fish types.

Orange roughy emerged as the most popular finfish purchased by caterers, with frequent purchases of hake, snapper and whiting also.

Estimates by caterers of what percentage of fish purchased was Australian shows hake as the real exception, with only 20% perceived as local.

The distribution of responses by city location for any particular species was often uneven (Table 3.5.2), but differences were not statistically significant.

Table 3.5.1: Eight Main Types of Finfish which Caterers sold in the Preceding Month, Preferred Format purchased by Caterers and Presumed Origin

Type of Finfish	Rank	Frequency of Response ⁽¹⁾	Preferred Form Bought ⁽²⁾ (Frequency ⁽¹⁾)	Origin - weighted average estimate (% local/Australian)
Orange roughy ⁽³⁾	1	26	Fillet (25/28)	78.0%
Hake	2	21	Fillet (20/22)	20.0%
Snapper	2	21	Fillet (11/27)	96.3%
Whiting (unspecified) ⁽⁴⁾	4	17	Fillet (15/18)	77.6%
Barramundi	5	14	Fillet (11/14)	91.4%
Atlantic salmon	6	11	Whole (5/15)	93.3%
Trout (unspecified) ⁽⁵⁾	7	11	Whole (9/12)	90%
Salmon, smoked pieces	8	11	Smoked/Fillet (13/13)	62.5%

(1) 95 respondents offered 299 responses for May 1991 and September 1991 surveys for a total of 67 fresh finfish species or types

(2) Alternative forms considered were: live, whole, fillet, cutlet, headed/gutted, smoked, or in some other form

(3) Orange roughy responses may be under-stated, since it is commonly known as sea perch in NSW. Such responses would be recorded as perch (unspecified), and there were 9 of these (6, 1 and 2 from Sydney, Brisbane and Perth respondents, respectively)

(4) There were additional specific responses for King George whiting (3) and grass whiting (3)

(5) There were additional specific responses for coral trout (4), rainbow trout (5), ocean trout (8) and smoked trout (3).

Table 3.5.2: Leading Finfish Species/Types sold by Caterers, According to Location

Leading Finfish Species/Types	Frequency of Responses, by City					
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Orange roughy ⁽¹⁾	4	9	7	5	0	1
Hake	6	6	2	3	3	1
Snapper (unspecified)	7	3	1	5	5	0
Whiting (unspecified) ⁽²⁾	4	6	2	5	0	0
Barramundi	5	0	7	0	2	0
Atlantic salmon	6	3	1	0	1	0
Trout (unspecified) ⁽³⁾	7	2	0	1	1	0
Salmon, smoked, pieces	7	1	1	0	1	1

(1) responses do not include responses for perch (unspecified)

(2) whiting species named in Table 3.5.1 footnotes are not included

(3) Does not include 4 responses for coral trout (Sydney 1, Brisbane 3), or 8 responses for ocean trout (Sydney 5, Melbourne 2, Brisbane 1)

The eight leading types of seafood prepared and sold by caterers are shown in Table 3.5.3. In contrast to the relative diversity of finfish bought by caterers, the three most popular seafood items (prawns, oysters and squid/calamari) accounted for 50% of all responses relating to seafood sales by caterers. Prawns were by far the most frequently purchased seafood item.

The frequency with which caterers indicated their use of seafood as “none” is relevant, considering this response’s seventh rating on a list of 29 seafood items.

Squid/calamari, mussels and scallops were regarded as substantially imported produce (Table 3.5.3).

Table 3.5.3: Eight Main Types of Seafood which Caterers sold in Preceding Month, Preferred Format purchased by Caterers and Presumed Origin

Type of Seafood	Rank	Frequency of Response ⁽¹⁾	Preferred Form Bought ⁽²⁾ (Frequency ⁽¹⁾)	Origin - weighted average estimate (% local/Australian)
Prawns	1	74	Whole (49/86)	78.0%
Oysters	2	29	Whole (22/29)	98.2%
Squid/calamari	3	23	Other (13/23)	50.0%
Scallops	4	16	Other (10/16)	50.0%
Crayfish (unspecified)	5	15	Whole (11/15)	96.4%
Mussels (unspecified)	6	14	Whole (11/15)	50.0%
None	7	13	-	-
Crab (unspecified)	8	10	Whole (7/11)	75.0%

(1) 95 respondents offered 241 responses for May 1991 and September 1991 surveys for a total of 29 seafood species or types

(2) Alternative forms considered were: live, whole, fillet, cutlet, headed/gutted, smoked, or in some other form. A larger number of responses for some species in this column reflects the emphasis of Question 5a, Appendix I on just six species.

The form in which fish and seafood was purchased by caterers varied, principally between filleted and whole (Tables 3.5.1 and 3.5.3). Caterers’ buying patterns for seafood, according to region (Table 3.5.4), reflected the same sort of unevenness as was seen with finfish; again, however, differences were not statistically significant.

Table 3.5.4: Leading Seafood Species/Types Sold by Caterers, According to Location

Leading Seafood Species/Types	Frequency of Responses, by City					
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Prawns	28	14	13	10	6	3
Oysters	12	6	3	3	4	1
Squid/calamari	12	1	3	3	4	0
Scallops	8	6	2	2	2	2
Crayfish (unspecified)	3	6	0	3	2	1
Mussels (unspecified)	7	2	1	1	3	0
None	4	6	2	0	0	1
Crab (unspecified)	4	2	1	1	2	0

Information on the quantities in which caterers typically buy fish and seafood is of marketing relevance. The number of caterers who bought particular species/types of fish or seafood in different weight range lots in the months preceding the May 1991 and September 1991 surveys have been left unaggregated, so as not to mask any seasonal influences (Figures 3.5.1 and 3.5.2). The most frequently purchased volume of finfish and seafood per month in either survey was under 100kg. Comparison of *aggregated* data for the two surveys suggests that a greater variety of finfish types than seafood comprised these relatively low volume purchases (Figures 3.5.3, 3.5.4). In qualitative terms there appears to be no substantial change in the overall volumes purchased between the two survey periods.

The same data have been used to investigate the actual volumes (kg) of specific finfish and seafood species/types purchased by caterers in the month prior to the two surveys. In the case of finfish, data are provided on 23 species/types for which the total purchase volume exceeded an arbitrary figure of 100kg (Table 3.5.5). Several points from the table are noteworthy. First, while caterers cited orange roughy as their most frequently purchased finfish (Table 3.5.1), the volumes of hake, whiting and shark purchased exceeded that for orange roughy. The position for shark is perhaps distorted by the relatively low number of buyers.

Table 3.5.5: Leading Finfish Types purchased by Caterers in the Month Prior to Survey⁽¹⁾

Species/Type of Finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Barramundi	275	30.6	225	45.0
Blue eye	140	35.0	32	10.7
Cod (smoked)	0	0	126	42.0
Dhufish	16	8.0	125	62.5
Dory, John	140	20.0	25	12.5
Emperor, red	186	49.0	0	0
Flounder	100	100.0	0	0
Hake	408	45.3	1,933	148.7
Kingclip	0	0	336	56.0
Orange roughy ⁽²⁾	447	34.4	421	28.1
Perch (unspecified)	7	3.5	121	20.2
Perch, Nile	20	20.0	190	95.0
Salmon, Atlantic	108	12.0	84	14.0
Salmon (unspecified)	150	37.5	0	0
Shark	45	15.0	980	490
Snapper	275	18.3	478	36.8
Sole	250	250.0	28	14.0
Threadfin	0	0	150	150.0

Continued

Table 3.5.5 continued:

Species/Type of Finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Trevally (unspecified) ⁽³⁾	60	60.0	265	44.2
Trout, ocean	47	5.9	145	20.7
Trout (unspecified) ⁽⁴⁾	146	24.3	101	16.8
Whiting, grass	48	48.0	230	115.0
Whiting (unspecified) ⁽⁵⁾	454	50.4	445	49.4

(1) An arbitrary cut off point of over 100kg total volume purchased in either survey was applied for inclusion in the Table

(2) Orange roughy volumes may be understated since it is commonly known as sea perch in NSW. Such responses would be recorded as perch (unspecified)

(3) Caterers made no specific mention of either blue/silver warehou (common alternative names) or to silver trevally (skippy)

(4) In addition to this, respondents specified 69.2kg and 20kg coral trout, 20kg and 50kg rainbow trout and 1kg and 85kg smoked trout as total volumes purchased in the May 1991 and September 1991 surveys

(5) A further 55kg King George whiting was specified in the September 1991 survey.

Second, the manner in which quite different volumes of some species have been bought prior to each survey suggests that caterers switch between species/types at different times of the year; this may reflect seasonal menu patterns as much as availability of supply and price.

For seafood, data on eleven species/types for which the total purchase volume by respondents across either survey exceeded an arbitrary figure of 100kg are presented in Table 3.5.6. Prawns were clearly not only the most frequently purchased items (Table 3.5.3) but were also the seafood bought by caterers in greatest volume. While oysters were the next most frequent purchase, their total purchased volumes were exceeded by several other seafood types of much lower purchase frequency, including squid/calamari, crab, crayfish, scallops and smoked salmon pieces.

Table 3.5.6: Leading Seafood Types purchased by Caterers in the Month Prior to Survey⁽¹⁾

Species/Type of Seafood	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Bugs	130	43.3	56	56.0
Crab (unspecified)	257	42.8	52	10.4
Crayfish (unspecified)	110	13.7	398	56.9
Mussels (unspecified)	128	12.8	46	9.2
Octopus	121	40.3	26	13.0
Oysters	92	6.6	101	6.7
Prawns	1,333	31.0	1,164	28.4
Scallops	102	8.5	159	15.9
Salmon (smoked pieces)	27	6.8	210	23.3
Squid/calamari	274	21.1	142	14.2

⁽¹⁾ An arbitrary cut off point of over 100kg total volume purchased in either survey was applied for inclusion in the Table.

As an indication of caterers' preference for a particular fish and seafood supply route, caterers were asked to specify the type of supplier used to supply each species/type of fish and seafood bought in the month preceding the survey. The popularity of a particular type of supplier (commercial fisherman/aquaculture farmer, general wholesaler, fish/seafood wholesaler/co-operative, wholesale fish market, or retailer) was then gauged by summing the number of times a particular type of supplier was referred to. (This is referred to as "frequency of use", and is analogous to adding all the separate items on everybody's shopping lists who shop at a particular type of store).

An indication of the *range* of fish and seafood business done by a particular type of supplier was gained by summing the number of distinct species handled by a supplier type, irrespective of the number of purchasers of that species/type (bracketed figures in Table 3.5.7).

Caterers showed a preference towards general wholesalers as their supplier of fish and seafood (Table 3.5.7). However, as a group their reliance on one particular type of supplier was not as marked as for either retailers or fishmongers (Trade/In-Home Report). This supply pattern may be related to the lower volumes of fish and seafood purchased by caterers.

As a check on the data supplied, interviewees were asked to estimate what proportion of the total amount spent by the business in the preceding month was accounted for by the range of species/types of fish and seafood discussed in the interview (Question 9a, Appendix I). On average, interviewees estimated this proportion as 91.2%. This high figure indicates the business focus by individual caterers on, at most, six main species/types of fish or seafood.

Table 3.5.7: The Relative Frequency That Caterers Used Certain Suppliers of Fish/Seafood and Range of Species Handled by Each Supplier Type*

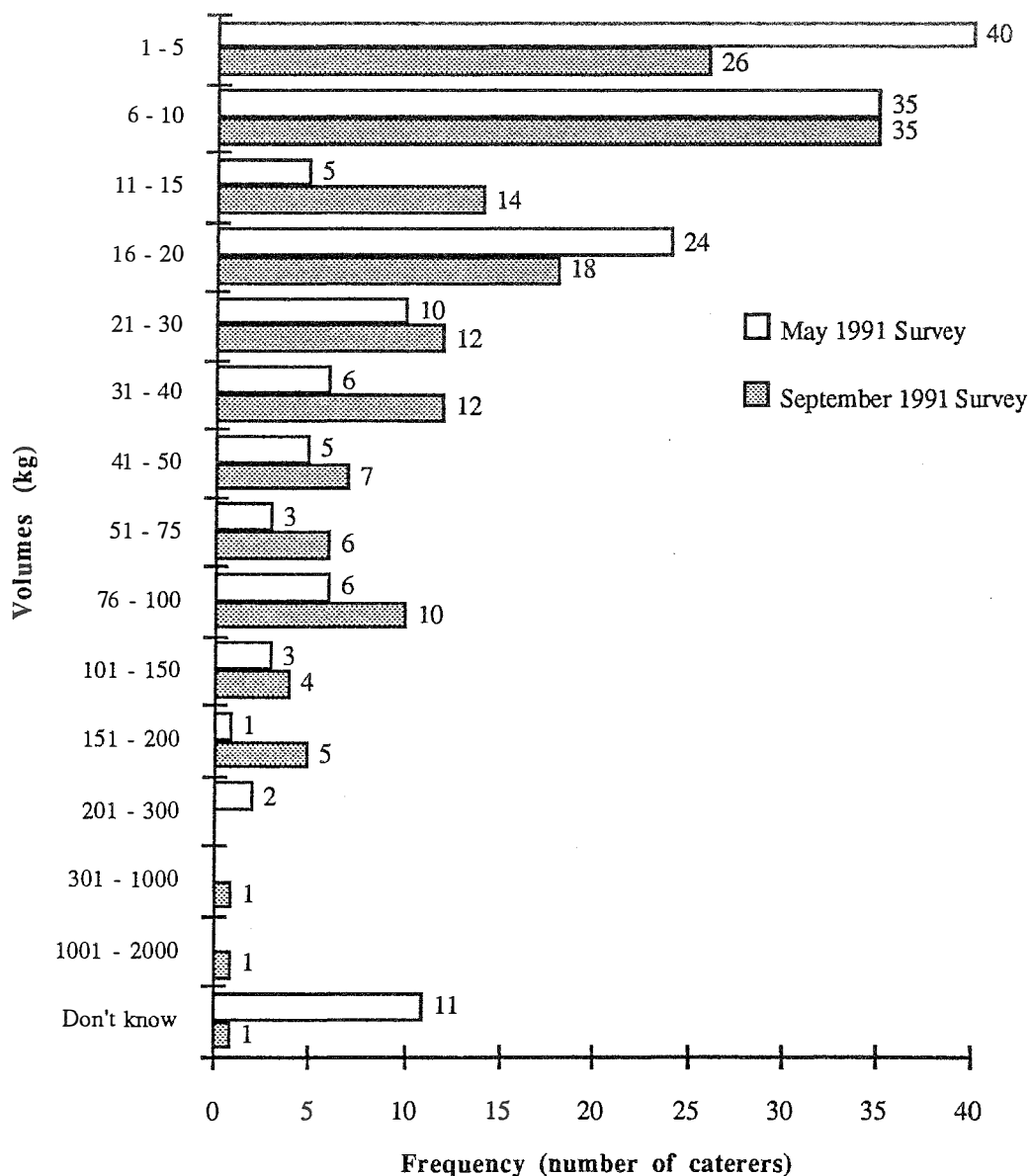
	Frequency of use for:			
	Fresh or Frozen Fish ⁽¹⁾ (Number of Species)		Seafood ⁽²⁾ (Number of Species)	
Commercial fisherman/ aquaculture farm	2.9%	(10)	1.5%	(3)
General wholesaler	36.2%	(42)	41.4%	(27)
Fish/seafood wholesaler/ co-operative	26.3%	(33)	26.5%	(20)
Wholesale fish market	17.3%	(28)	19.4%	(14)
Retailer	9.9%	(20)	7.8%	(10)
Other	0.3%	(1)	0%	(0)
No answer	7.1%	(13)	3.4%	(7)
Totals	100%		100%	

(1) based on 312 responses

(2) based on 268 responses

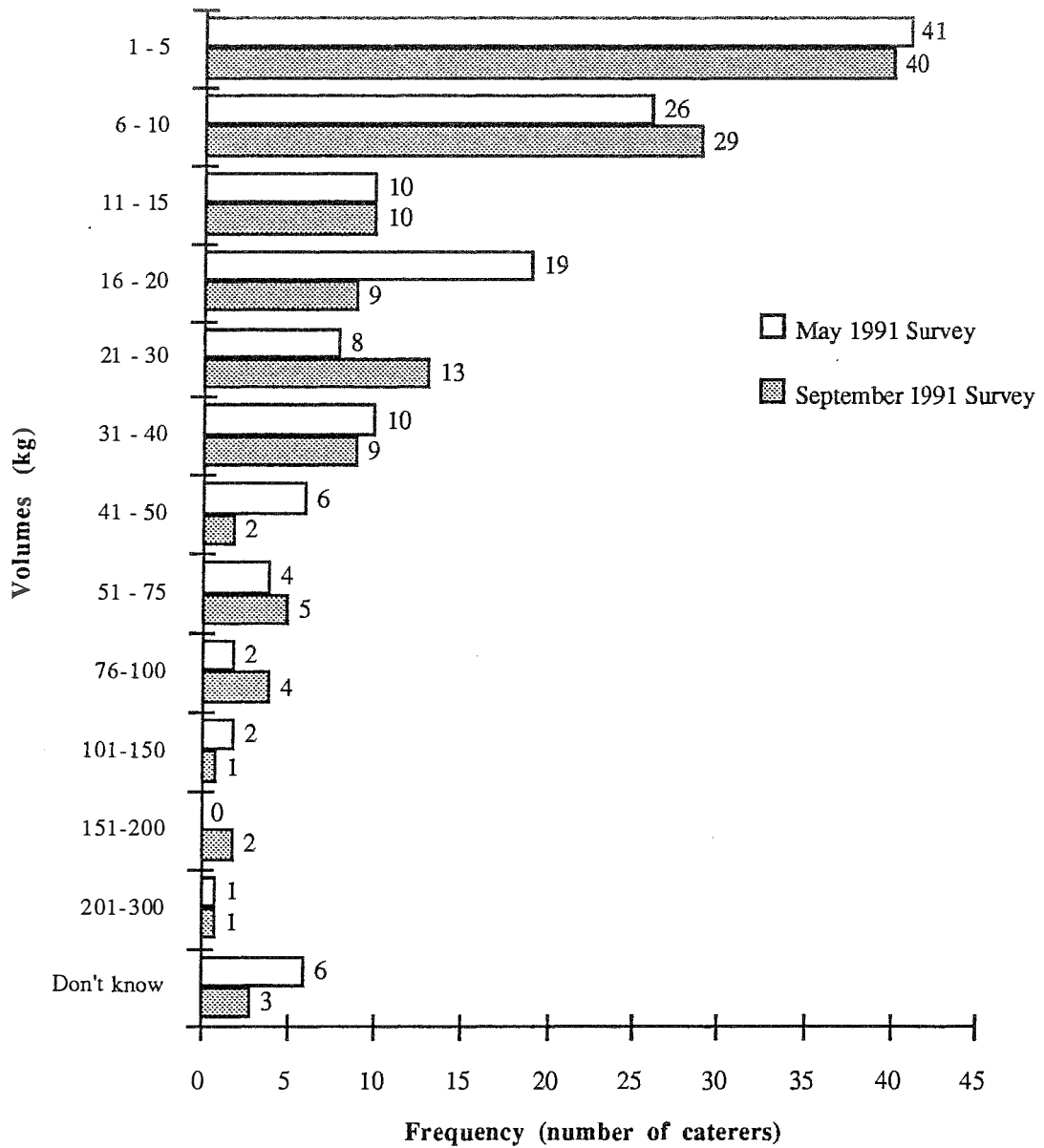
** for purchases over the month preceding the survey*

Figure 3.5.1: Number of Caterers Who Bought Particular Species/Types of Finfish in Different Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys



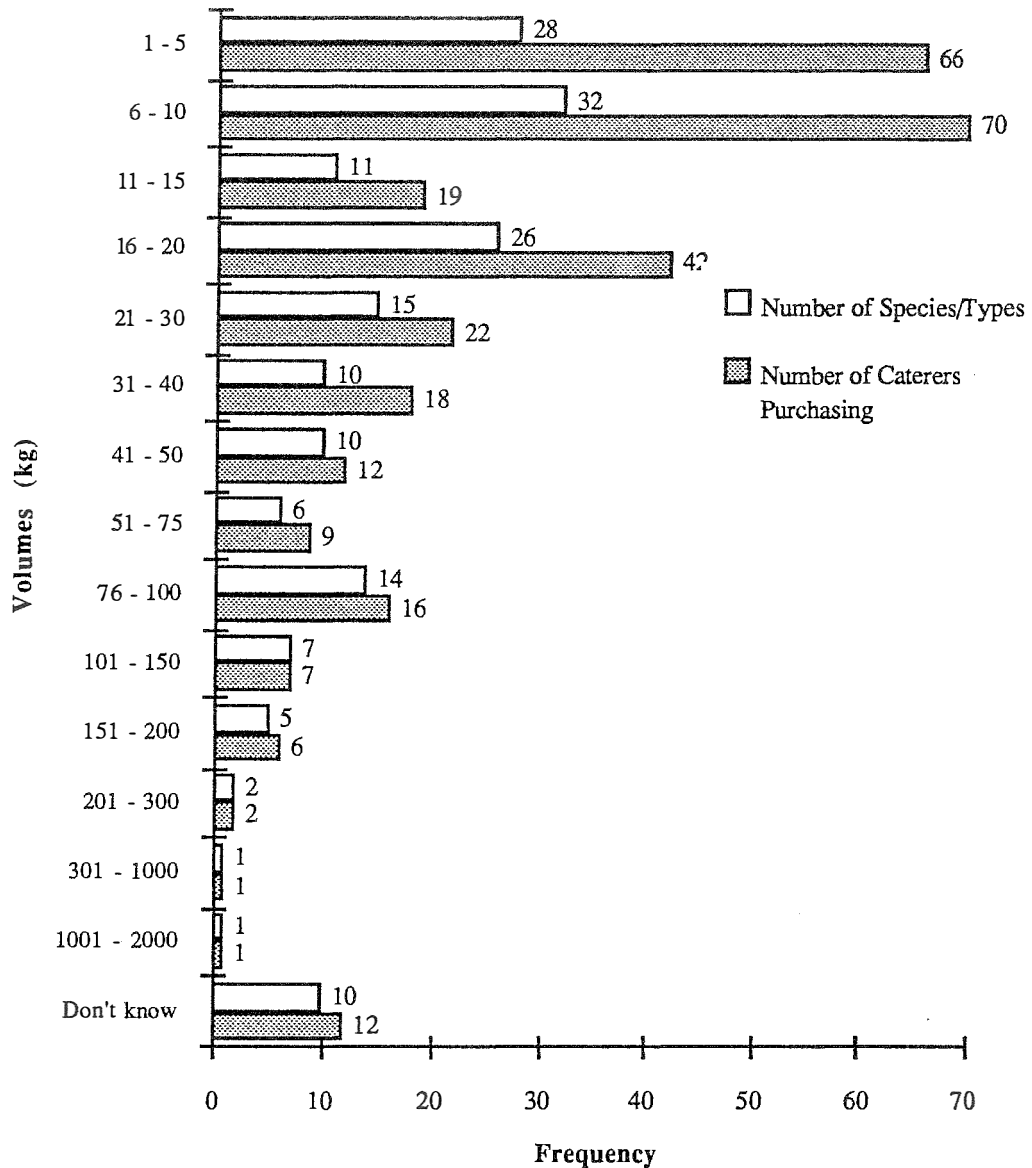
(see Question 7a, Appendix I)

Figure 3.5.2: Number of Caterers Who Bought Particular Species/Types of Seafood in Different Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys



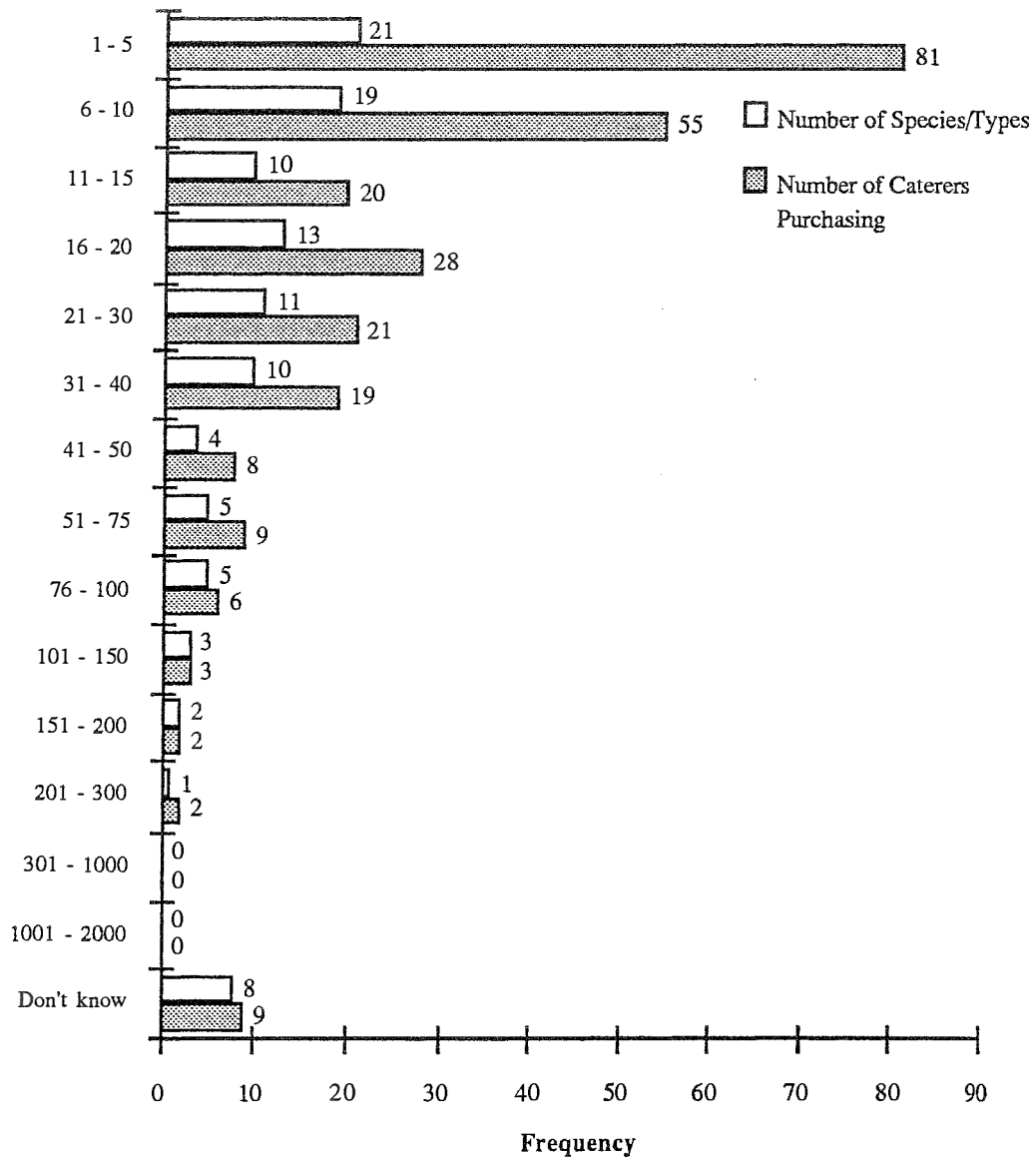
(see Question 7a, Appendix I)

Figure: 3.5.3: Number of Caterers Who Purchased the Shown Number of Species/Types of Finfish in Particular Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys (data aggregated across both surveys)



Respondents offered 303 responses on 60 fish species of types for May 1991 and September 1991 surveys (see Question 7a, Appendix I).

Figure 3.5.4: Number of Caterers Who Purchased the Shown Number of Species/Types of Seafood in Particular Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys (data aggregated across both surveys)



Respondents offered 263 responses on 33 seafood species or types for May 1991 and September 1991 surveys (see Question 7a, Appendix I).

3.6 Stock Selection, Supplier Selection and Supplier Rating

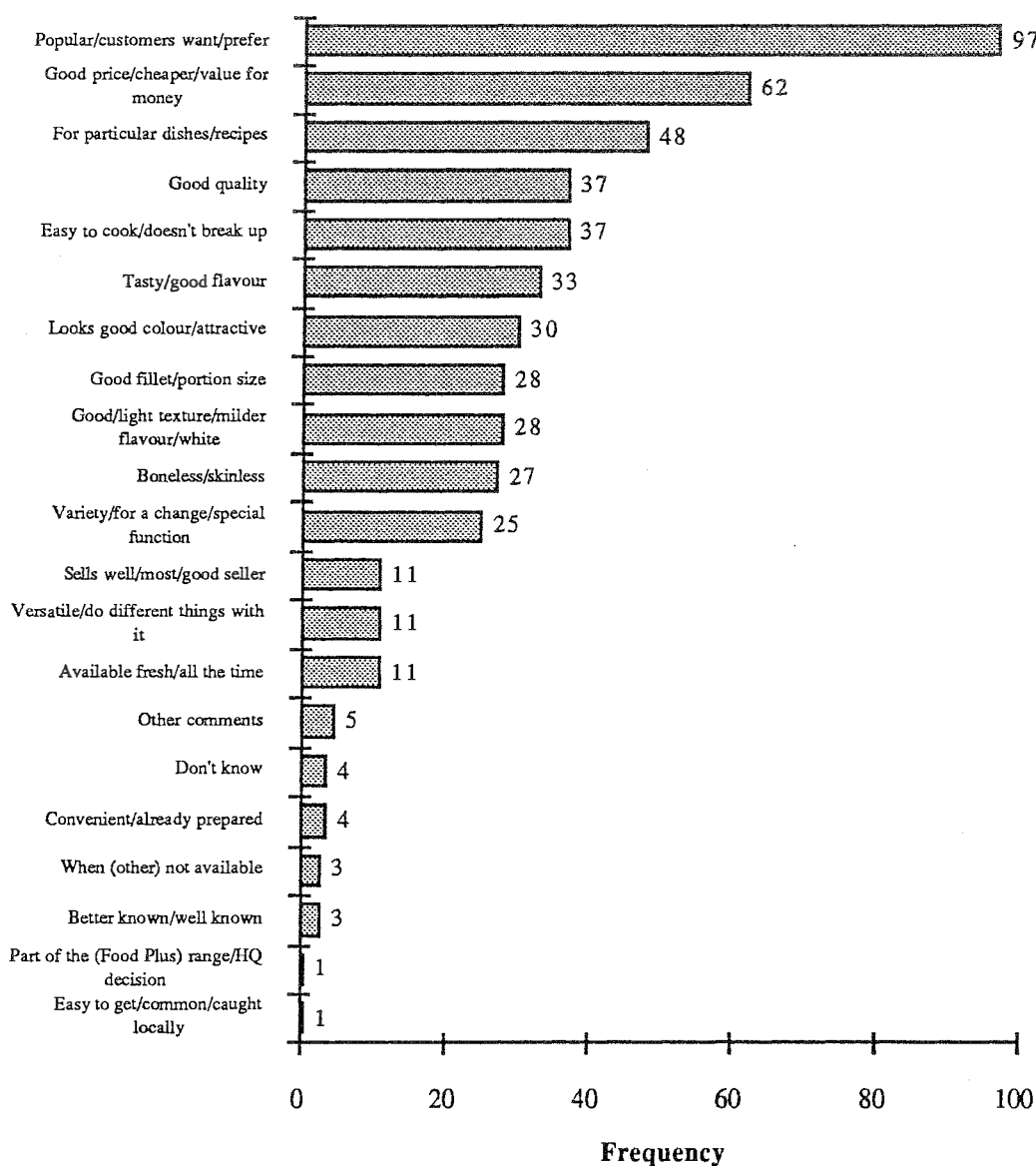
The basis on which caterers selected their fish and seafood stock was investigated by asking them to cite the principal reasons for purchasing their stock range (Question 9b, Appendix I). The resulting data, presented in Figure 3.6.1, show a strong service orientation; customer preference was the main reason behind purchases, with aspects of price, particular usage, quality, functionality, flavour and convenience accounting for over 80% of responses. Further analysis of the data revealed that 26% of responses for “popular/customers want/prefer” related to whiting, orange roughly and smoked salmon pieces alone. Similarly, 19% of responses for “good price/cheaper/value for money” related to hake as a purchase item.

87% of the caterers interviewed confirmed that they bought fish and seafood products without purchase contracts (Question 10a, Appendix I). Those caterers who bought their fish and seafood **without** purchase contracts (ie the vast majority) were then asked to comment on the importance to them of a range of 18 factors when choosing a supplier (Question 11a, Appendix I). As seen in Figure 3.6.2, prompt attention to orders and business transacted in an honest and fair manner were considered the most important criteria by caterers in choosing a supplier.

Caterers subsequently rated their main suppliers against these same 18 factors (Question 11b, Appendix I); their level of satisfaction with suppliers’ promptness in attending to orders dropped to fifth rank, while “honest and fair in doing business” declined to seventh (Figure 3.6.3). While their suppliers’ performance against these two criteria did not rank too highly, caterers responded favourably to some quality and service aspects of their suppliers, ie:

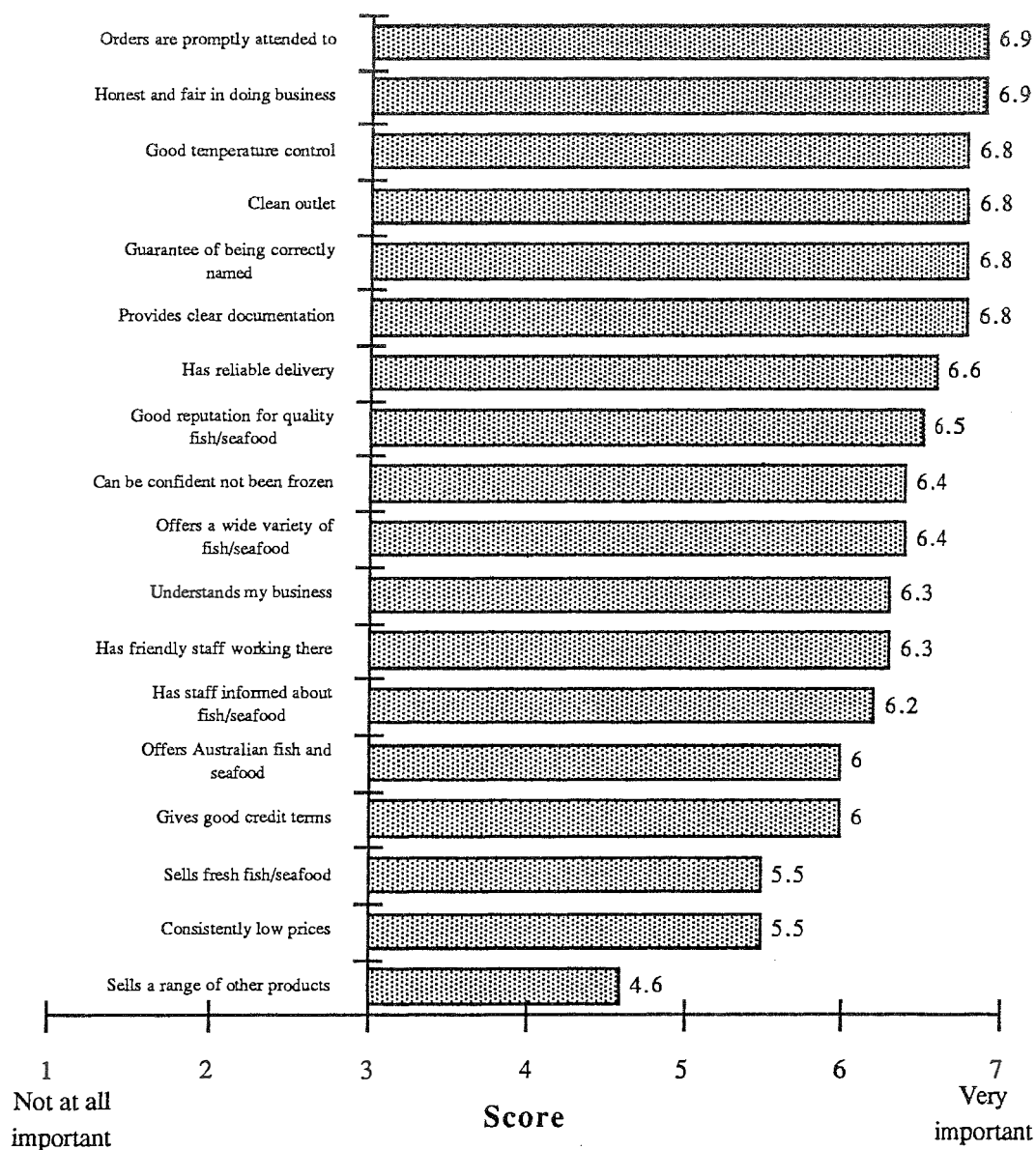
- “good temperature control”, and
- “provides clear documentation”.

Figure 3.6.1: Caterers' Reasons for Purchase of Main Finfish



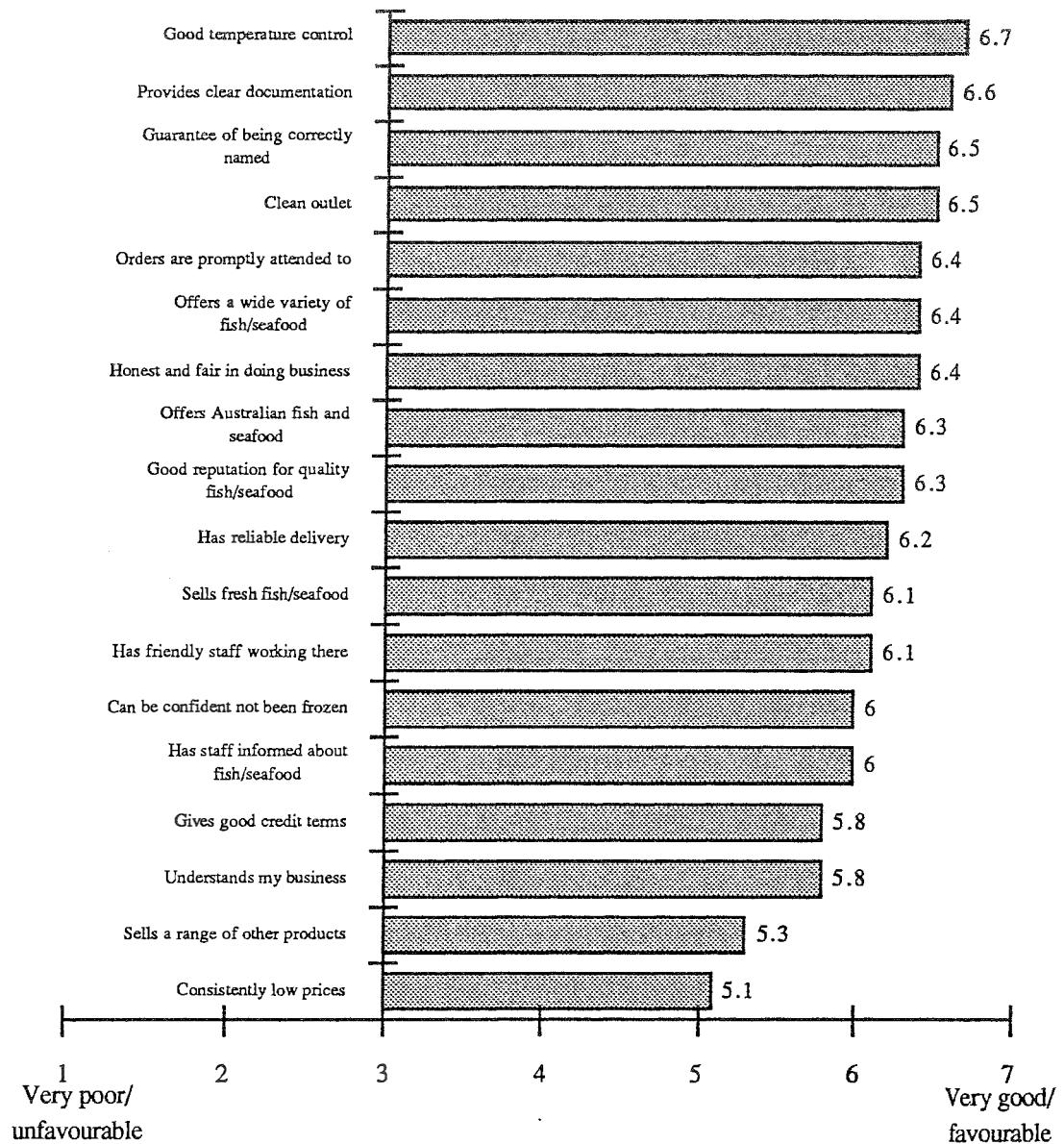
Respondents offered 506 responses for 70 fish species/types for May 1991 and September 1991 surveys (see Question 9b, Appendix I).

Figure 3.6.2 Factors Important to Caterers When Choosing Supplier of Fish or Seafood



89 respondents offered ratings on each of 18 factors for May 1991 and September 1991 surveys (see Question 11a, Appendix I).

Figure 3.6.3 Caterers' Rating of Main Wholesale Supplier



89 respondents offered ratings on each of 18 factors for May 1991 and September 1991 surveys (see Question 11b, Appendix I).

3.7 Species/Types and Products with Potential for Increased Usage

As a lead into discussing the potential for increased usage of a range of under-utilised species/types (under-utilised in the sense of available capacity), caterers were asked to (Question 12a, Appendix I) comment on whether they had noticed any particular trends with **their customers** over the last 12 months (Figure 3.7.1).

At least twice as many caterers agreed as disagreed that there was:

- more concern about general health
- a desire to eat less fat and saturated oils
- the purchase of more grilled rather than fried fish

on the part of their customers.

On the other hand, at least twice as many disagreed as agreed about any trends by their customers towards:

- more concern about the accuracy of the name of the fish sold
- eating more fish than meat.

When asked to identify any other trends in food preferences on the part of their customers, caterers most frequently responded that “nothing” additional was apparent (Figure 3.7.2). On a more general level however, caterers reaffirmed the shift towards healthier, lighter eating, which is consistent with the greater concern about health.

Of the range of wild and farmed species of fish and seafood which the fishing industry has identified as under-utilised, caterers considered that farm barramundi had the greatest potential for increased usage. Farm prawns, Atlantic salmon and squid were also more frequently rated as having potential than the other seven species suggested to caterers (Figure 3.7.3). Jack mackerel was the species considered to have the least potential.

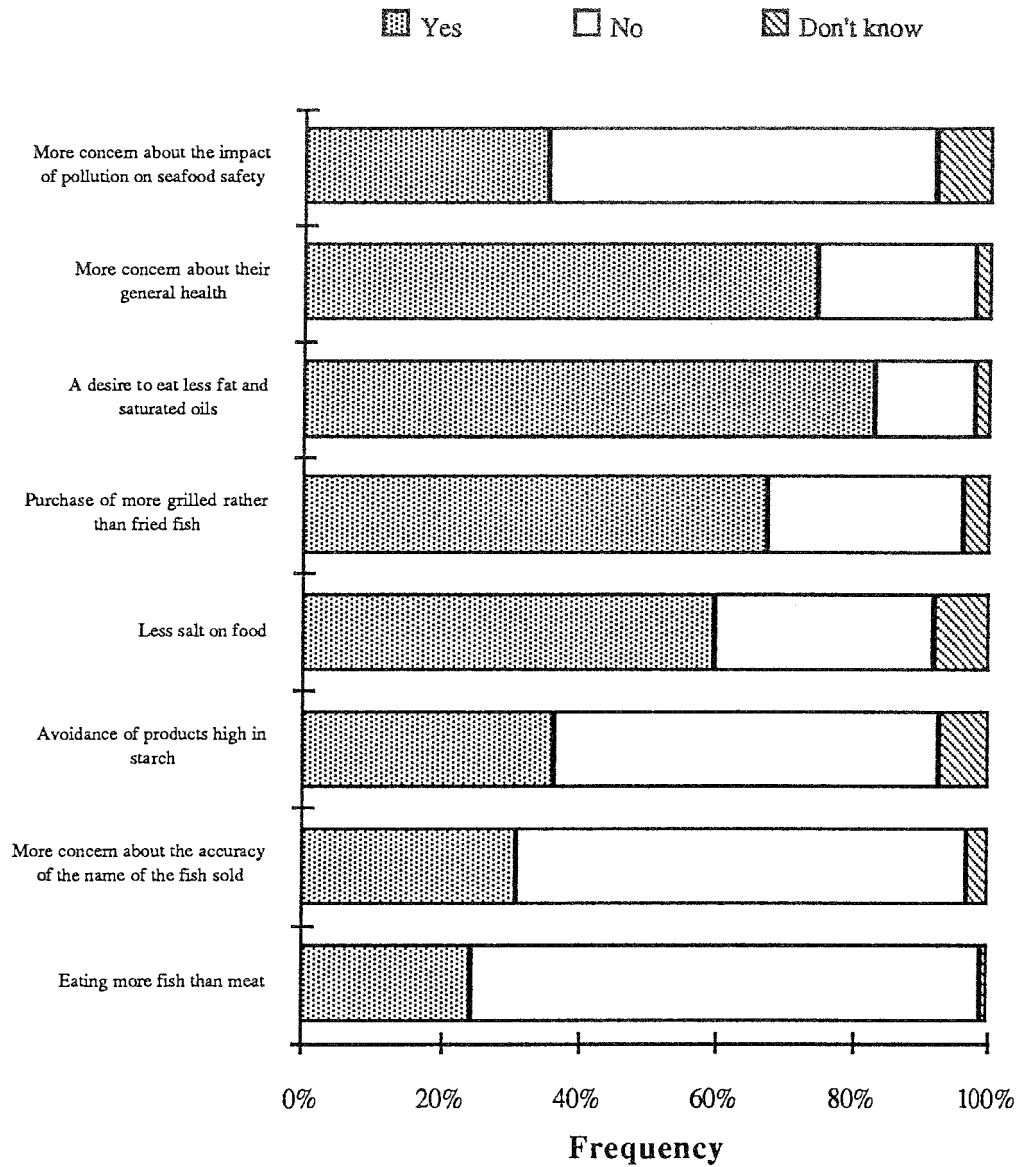
Caterers' main reasons for believing in the potential of these under-utilised species are shown in Figure 3.7.4. Customer demand was the leading single reason given, followed by flavour and potential supply (through farming).

A closer examination of the data reveals that farm barramundi and squid attracted 20% and 17% of responses respectively for the reason "popular fish/in demand". For "good flavoured fish", Atlantic salmon and farm barramundi were associated with 24% and 21% of responses, respectively.

The principal species associated with "always available/constant supply if farmed" were barramundi and prawns (31% and 28% of responses, respectively).

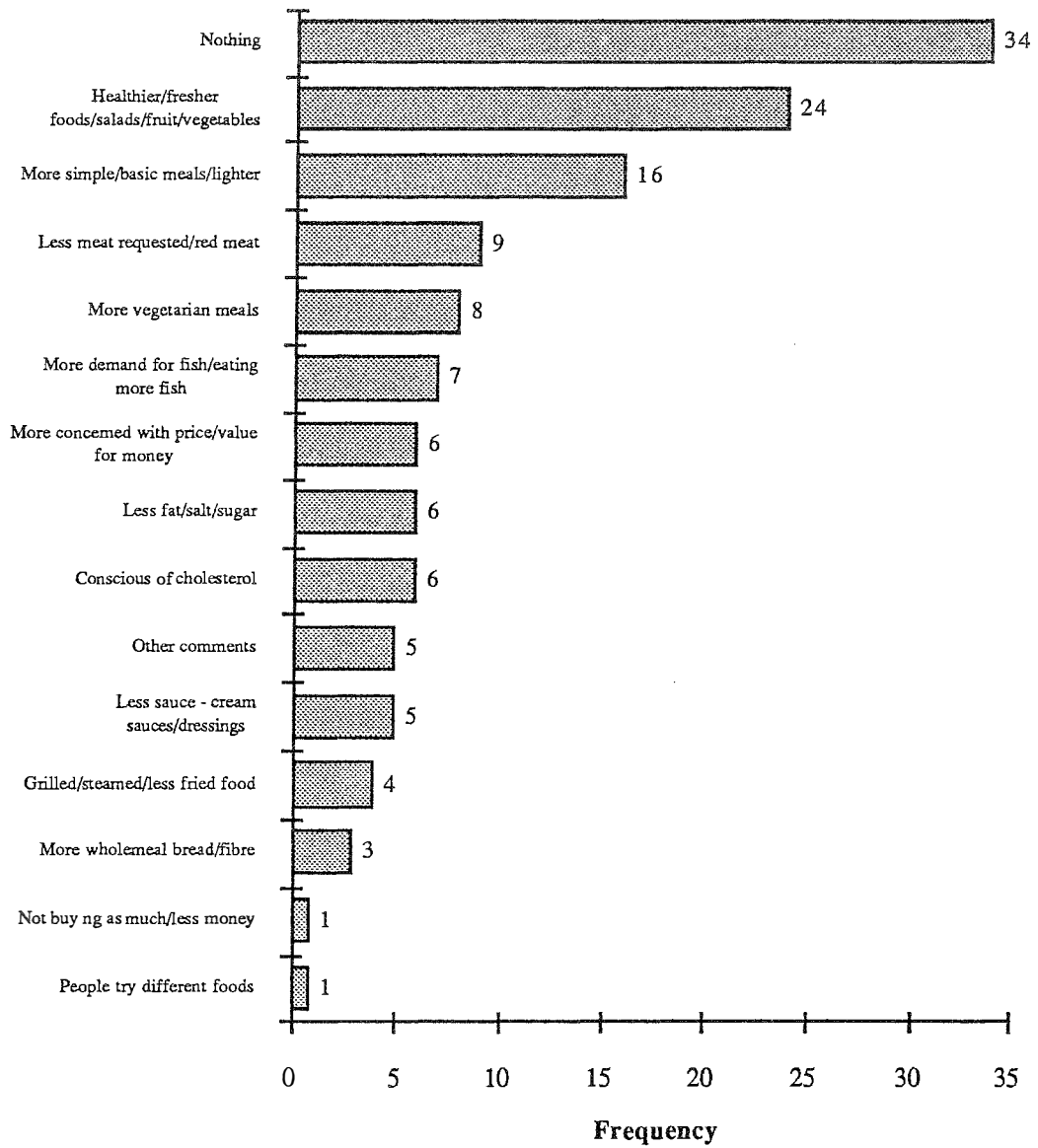
The benefit of "quality control" was particularly associated with farm prawns (48% of responses).

Figure 3.7.1: Trends with Customers' Food Preferences Noticed by Caterers Over the Preceding 12 Months



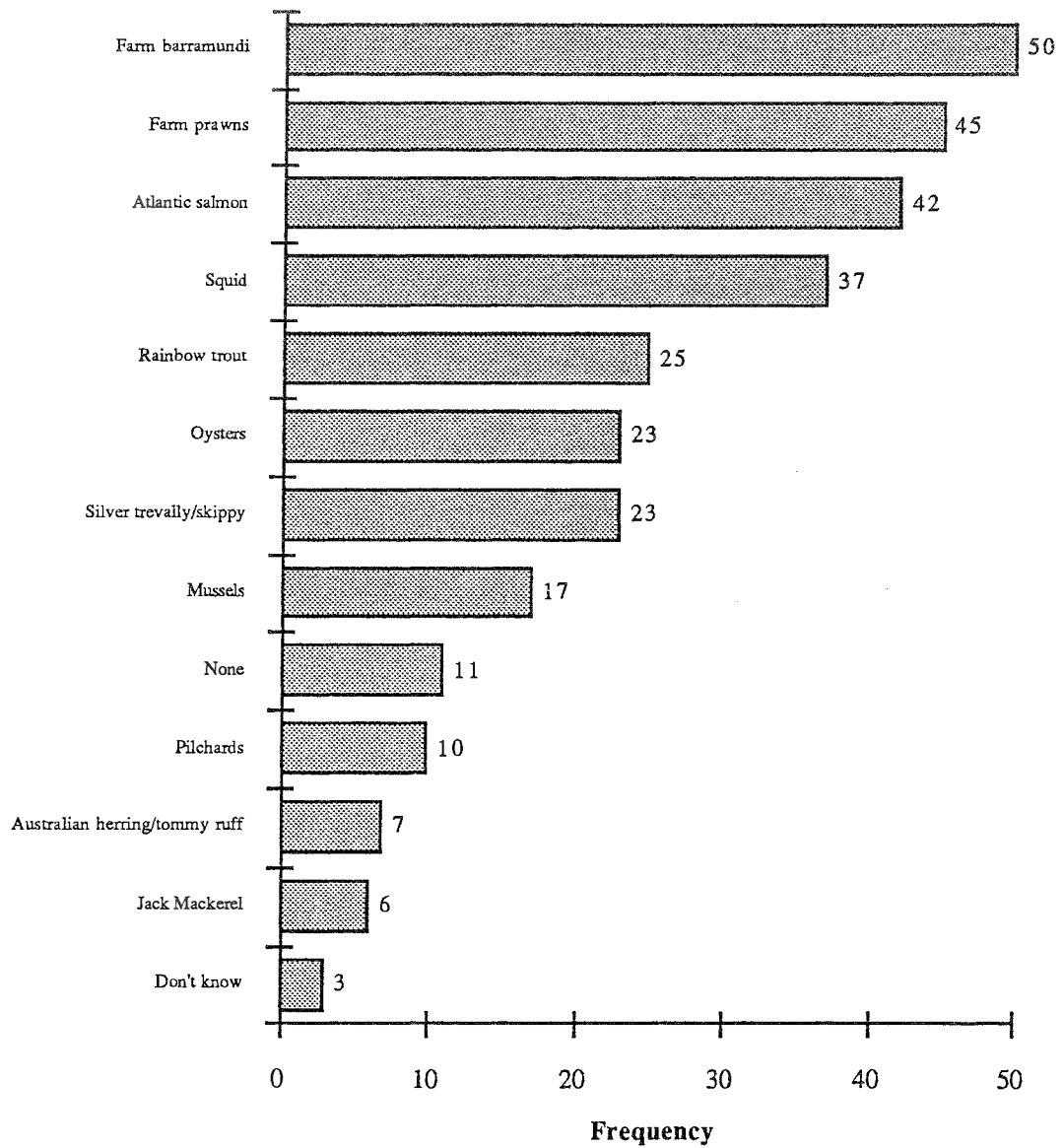
94 respondents offered responses to each of 8 trend issues for May 1991 and September 1991 surveys (see Question 12a, Appendix I).

Figure 3.7.2 Other Trends in Food Preferences Noticed in Last 12 Months by Caterers



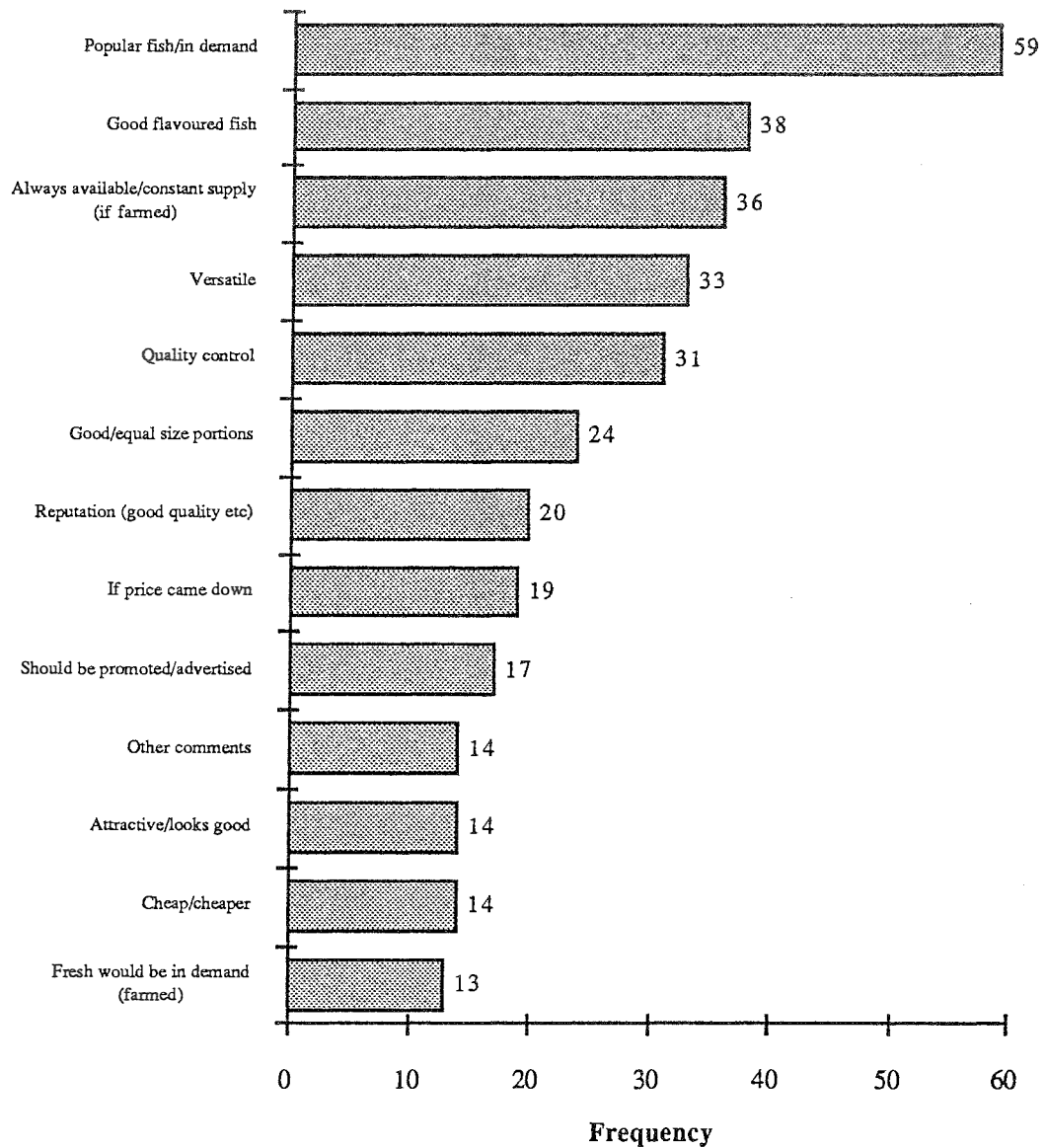
94 respondents offered 135 responses for May 1991 and September 1991 survey (see Question 12b, Appendix I).

Figure 3.7.3 Under-utilised Species with Potential for Increased Usage by Caterers



101 respondents offered 299 responses for May 1991 and September 1991 survey (see Question 14a, Appendix I).

Figure 3.7.4: Caterers' Major Reasons⁽¹⁾ for Believing Potential Lies with Under-utilised Species



94 respondents offered 411 responses for May 1991 and September 1991 survey (see Question 14b, Appendix I)

(1) The 'reasons' shown comprise the leading 80% of all responses

3.8 Caterer and Industry Initiatives to sell more Fish

Caterers had earlier (Section 3.4) raised the issues of fish and seafood perishability, price and supply as problems in its sale. Not surprisingly, when asked what actions needed to be taken by their own business to buy more fish and seafood products (Question 13a, Appendix I), the leading response was “none” (Figure 3.8.1). Less frequently, they saw that they could help the sale of fish and seafood by offering specials, taking additional measures to fuel customer demand and by becoming more actively involved in advertising and promotions. Simply adding more fish meals to their menus and/or increasing the variety and supply of fish available were not seen as sufficient actions.

Caterers’ concerns over the price of fish and seafood and the need to fuel demand through advertising and promotions was reinforced by their views on what actions need to be taken by the fishing industry in general for more fish and seafood to be bought by their business (Question 13b, Appendix I). Suggested priority actions related to price (and price fluctuations) and increased advertising. Perhaps surprisingly, comments that “nothing” should be done were relatively frequent (Figure 3.8.2). Calls for better quality, correct naming of fish, better portion size and more emphasis on fresh (not frozen) product were not seen as areas for priority action by the fishing industry. The development of recipe leaflets was one of the least favoured actions.

In a more direct approach, caterers were asked their views on the likelihood that all or any of ten specific actions would lead to an increase in their sale of fish and seafood products (Question 13c, Appendix I). The two actions considered most likely to increase sales were:

- greater supply and variety of Australian fish
- guarantee of consistent supply (Figure 3.8.3).

Presumably this emphasis on increased supply was considered to have its impact through unit price reduction. Despite caterers' earlier preoccupation with freshness and perishability of fish and seafood, little significance was placed on developing:

- guidelines for **(your) suppliers** for improved storage to increase the “life” of fish and seafood

or

- guidelines for **food preparers** for improved storage to increase the “life” of fish and seafood.

Overall, caterers' reactions to the likely success of these actions in increasing fish and seafood sales were only lukewarm; most responses fell in the three to four score range, ie “neither likely nor unlikely” to “somewhat likely” to have an impact (Figure 3.8.3).

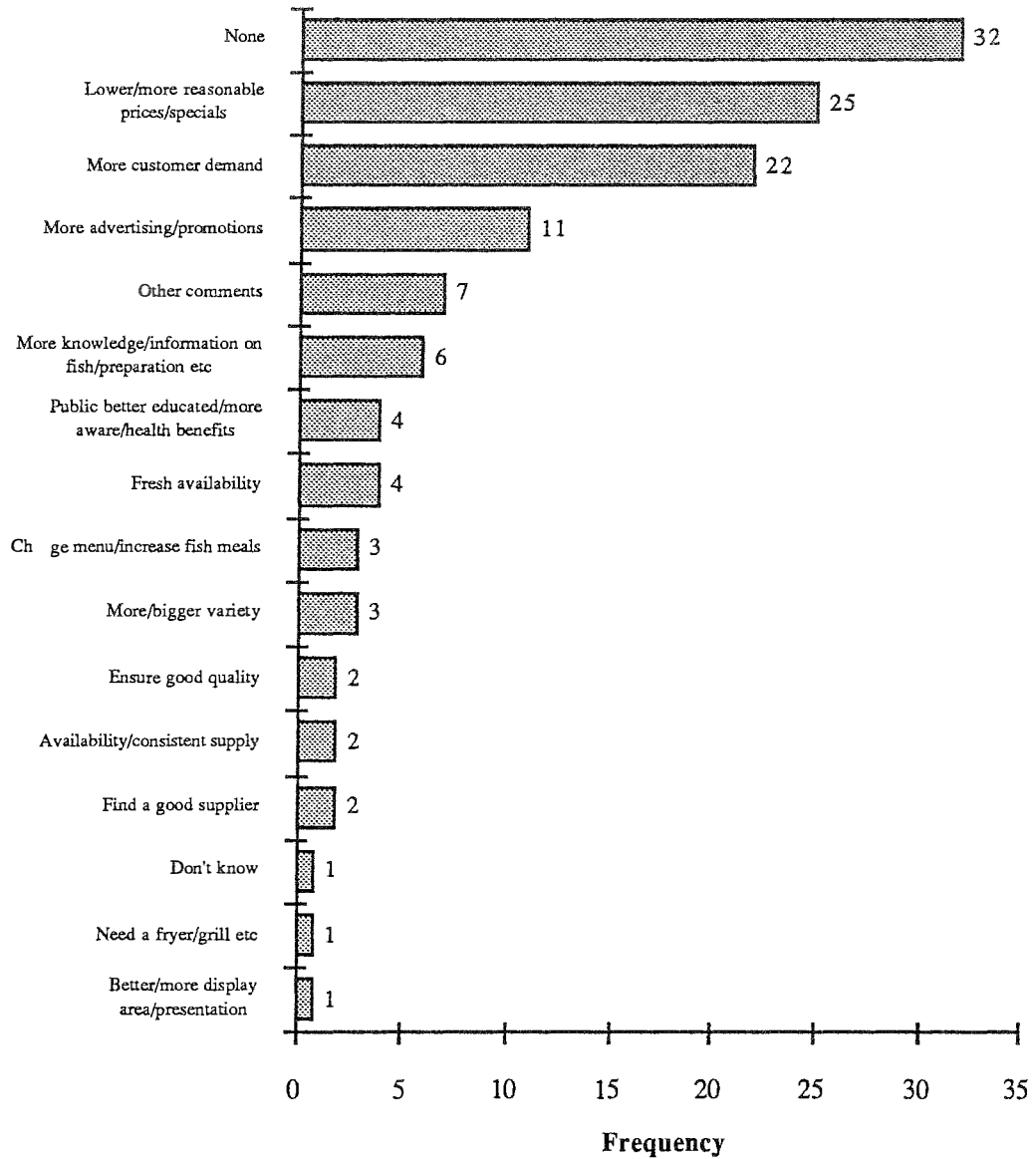
Nevertheless, caterers were generally optimistic that sales of fish and seafood would increase over the next five years (Questions 15 a, b, Appendix I; Figure 3.8.4). The principal reasons for this view were health-related, ie:

- people becoming more health conscious
- eating more fish
- no/low cholesterol; fish is a health food.

Where neutral to negative views were expressed, the principal justifications given were:

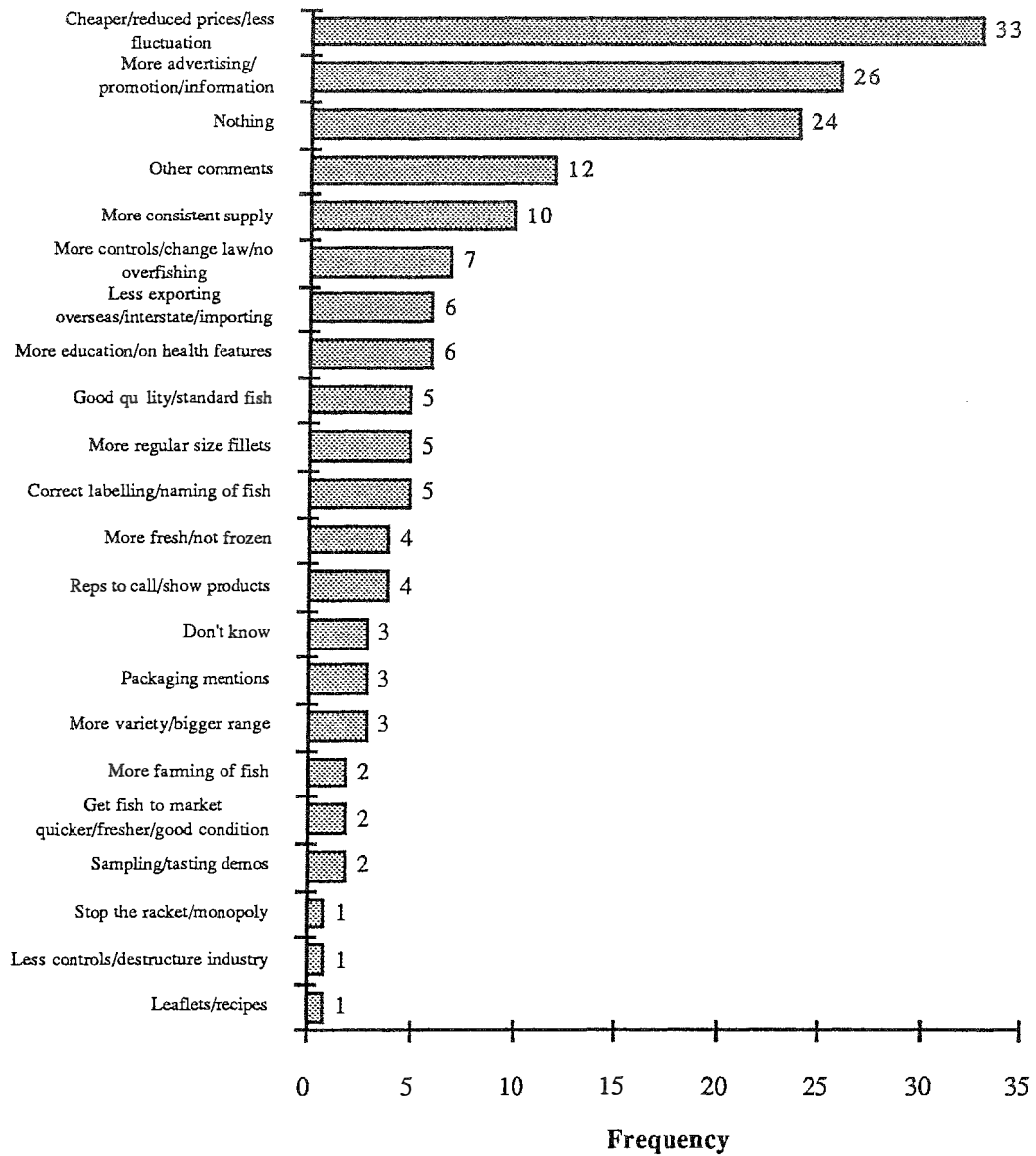
- there has been no change in five to ten years
- fish/seafood becoming too expensive/people can't buy it.

Figure 3.8.1: Actions Needed for Caterers to Buy More Fish/Seafood



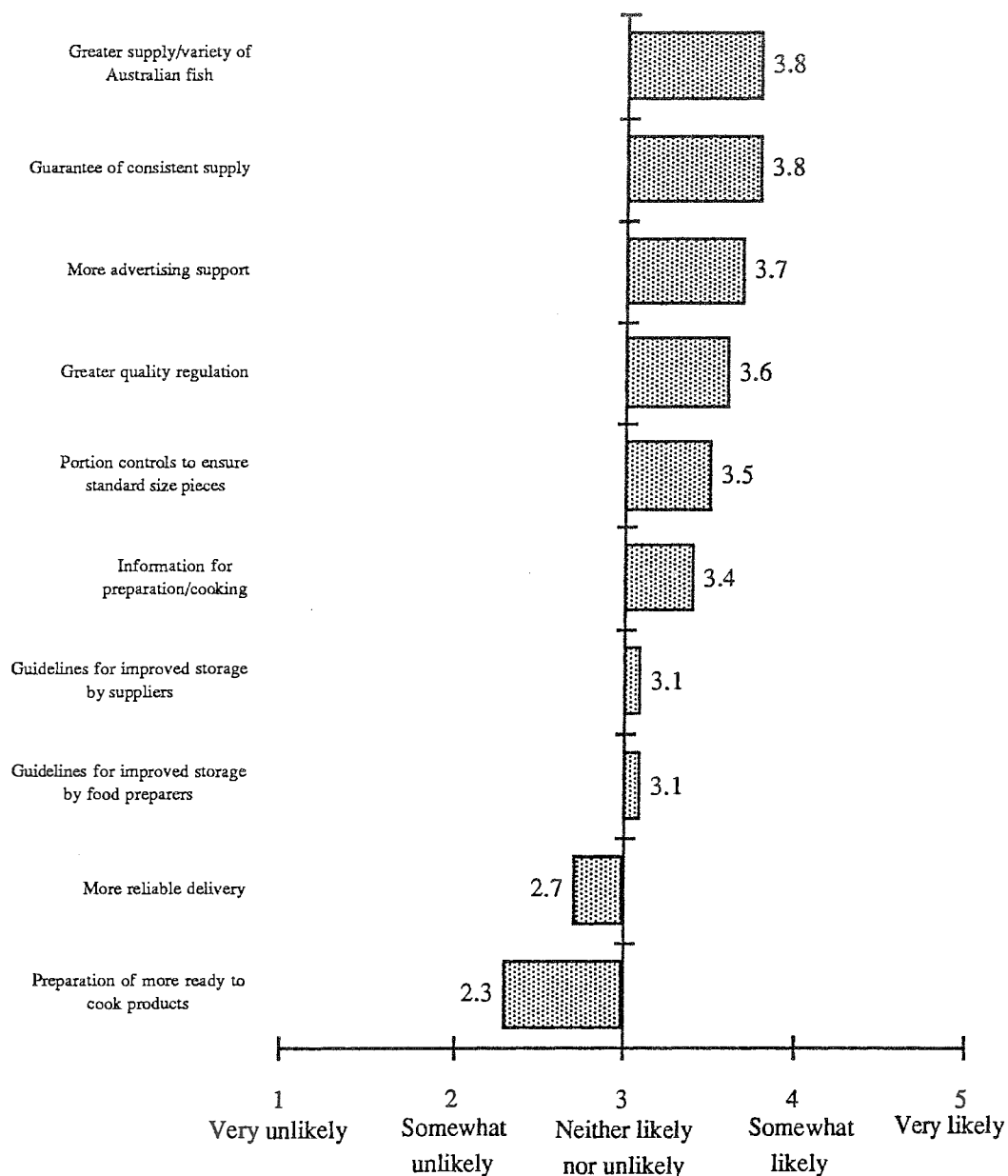
101 respondents offered 126 responses for May 1991 and September 1991 surveys (see Question 13a, Appendix I).

Figure 3.8.2: Actions Needed by Fishing Industry for Caterers to Buy More



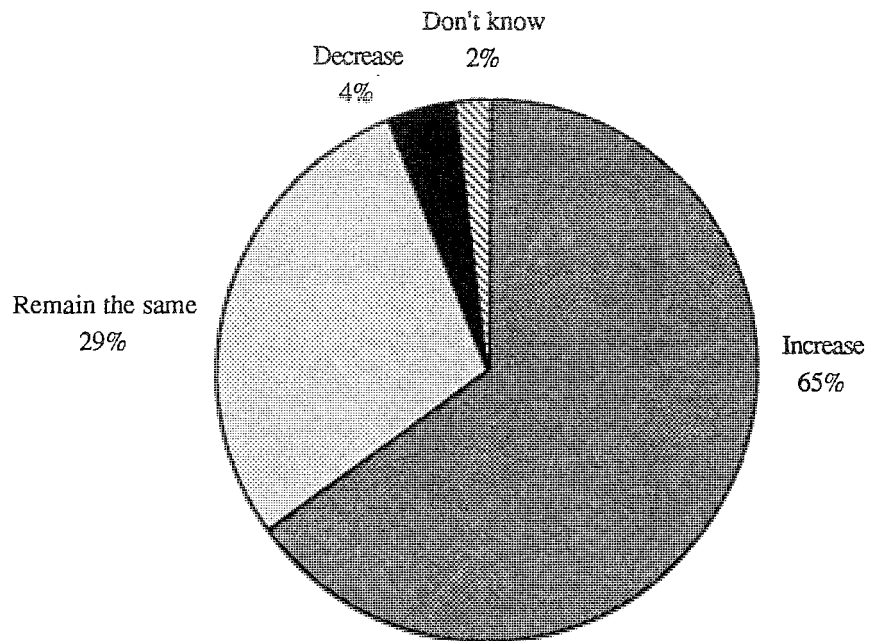
101 respondents offered 165 responses for May 1991 and September 1991 surveys (see Question 13b, Appendix I).

Figure 3.8.3 Likelihood of Actions Leading to Increase in Fish and Seafood Products Purchased by Caterers



101 respondents offered responses on each of 10 actions for May 1991 and September 1991 surveys (see Question 13c, Appendix I).

Figure 3.8.4: Caterers' Opinions of Sales Prospects for Fish/Seafood over the next Five Years



101 respondents offered 101 responses for May 1991 and September 1991 surveys (see Question 15a, Appendix I).

3.9 Business Details - Turnover and Staff

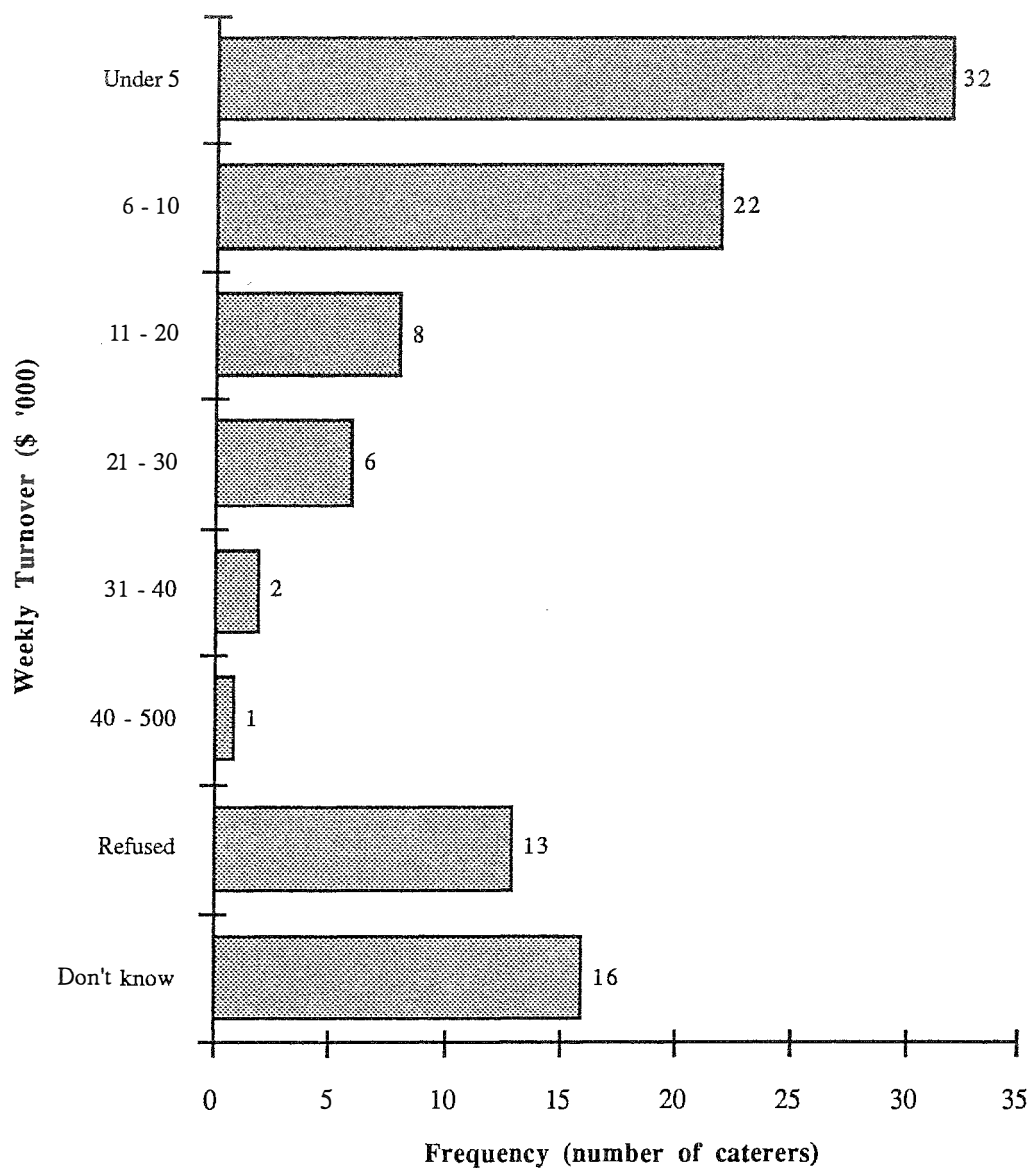
Further details of caterers' business were gathered through Questions 16 and 17 (Appendix I). The majority of caterers' businesses had a weekly non-liquor turnover of under \$5,000, with businesses in the range of \$6,000 to \$10,000 per week being the next most frequent (Figure 3.9.1). The relatively few businesses with turnovers exceeding this had the effect of raising the average weekly non-liquor turnover to \$15,391.70.

Half of the caterers' businesses in the study suggested that between 1% to 10% of their sales came from fish/seafood (Figure 3.9.2). The computed average figure (16.8%) on the basis of responses does not quite tally with the average from Figure 3.9.1 and respondents' own estimates of the actual dollar value of weekly sales due to fish/seafood products (Figure 3.9.3). The computed average value of weekly sales due to fish/seafood (\$1,964.40) would be consistent with an average of around 13% of sales coming from fish and seafood.

Caterers estimated that on average 84% of their fish and seafood sales related to fresh or frozen product, 12% from canned and 4% from other product types (Figure 3.9.4).

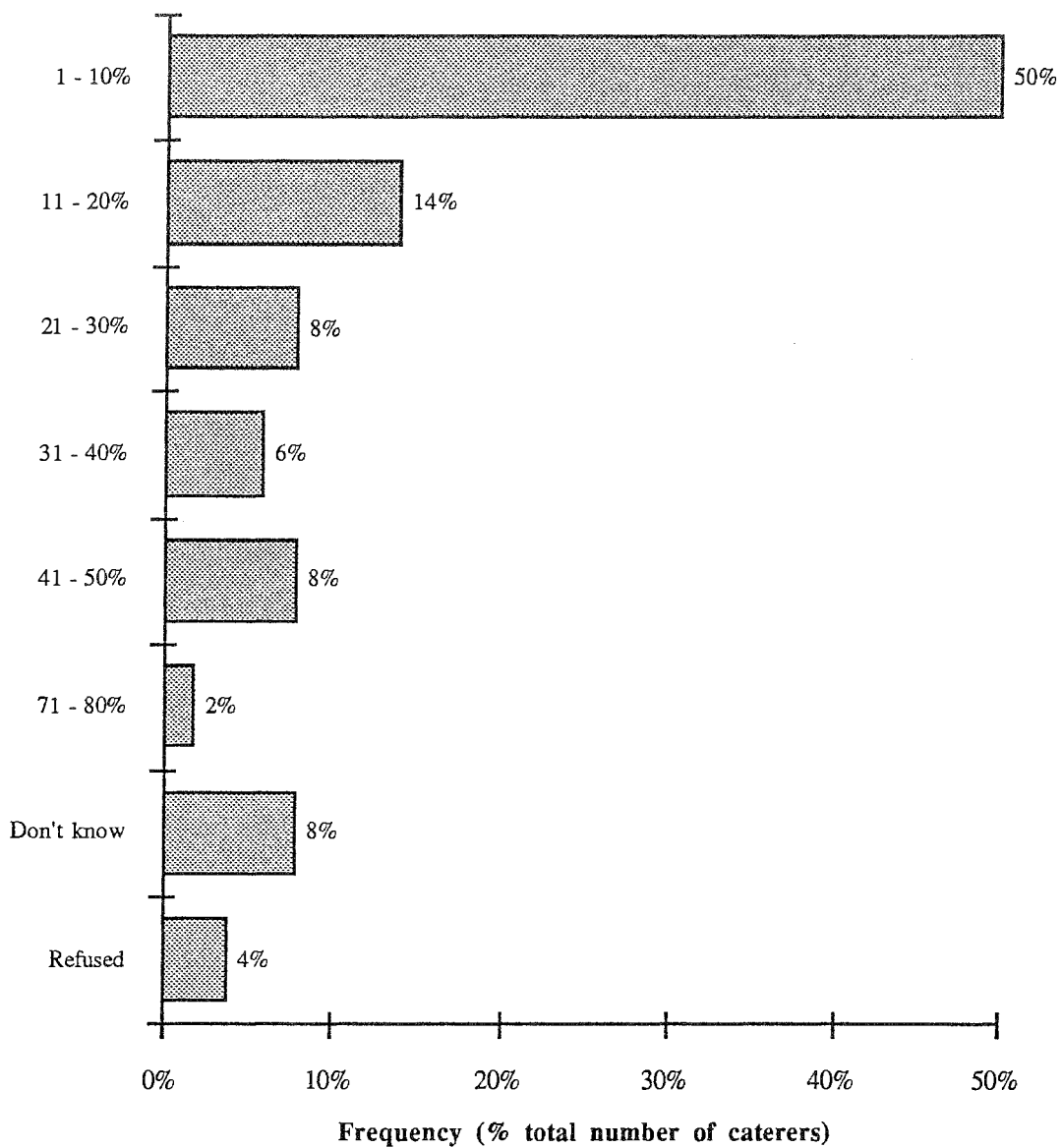
The average numbers of full time and part time staff employed by Caterers were 21.6 and 55, respectively. Most frequently two full time staff and six to ten part time staff were associated with the businesses, but averages were inflated by one large Brisbane business.

Figure 3.9.1 Average Weekly Non-Liquor Turnover of Caterers' Business



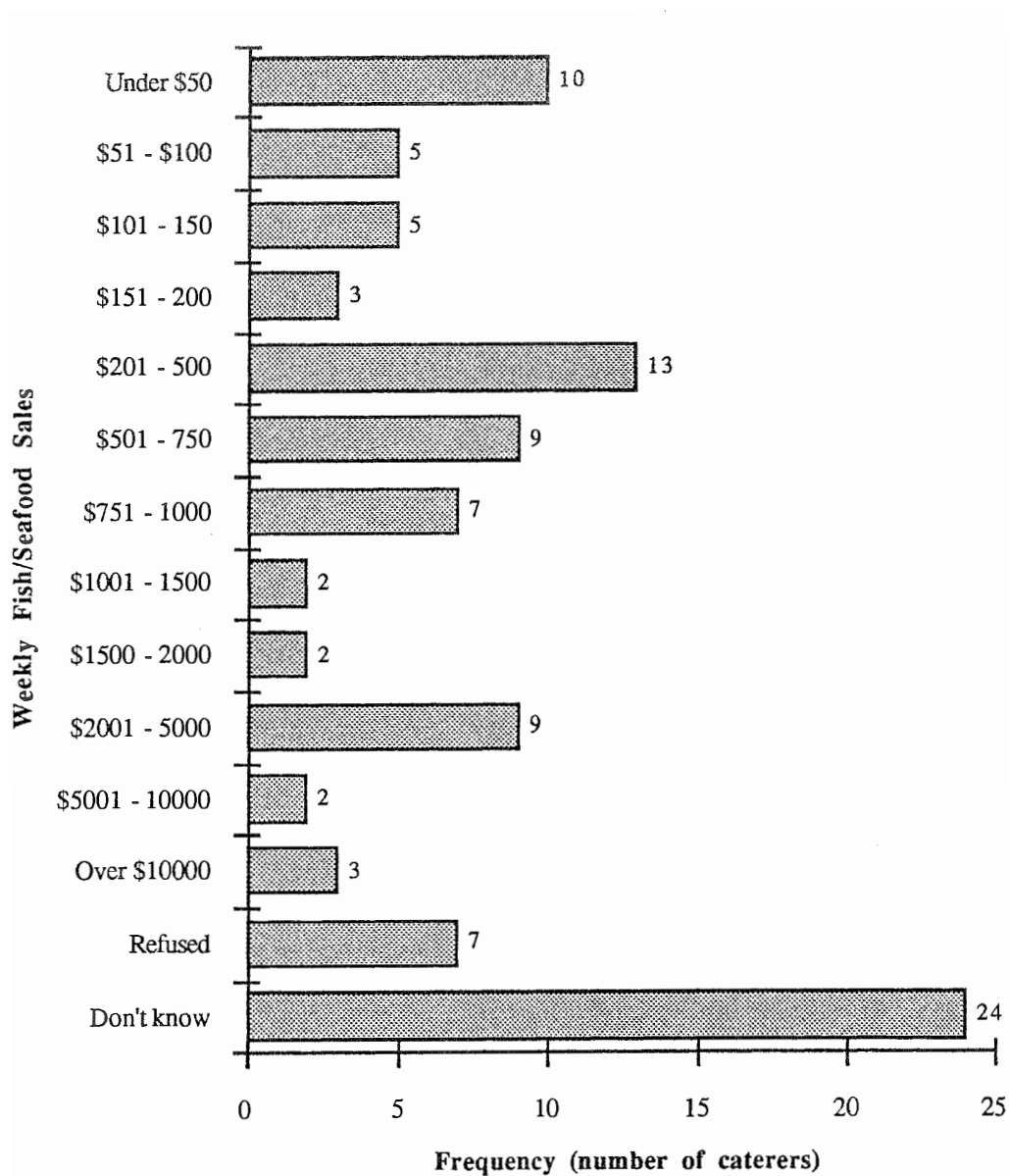
101 respondents offered 101 responses for May 1991 and September 1991 survey (see Question 16a, Appendix I).

Figure 3.9.2: Percentage of Caterers' Sales due to Fish/Seafood



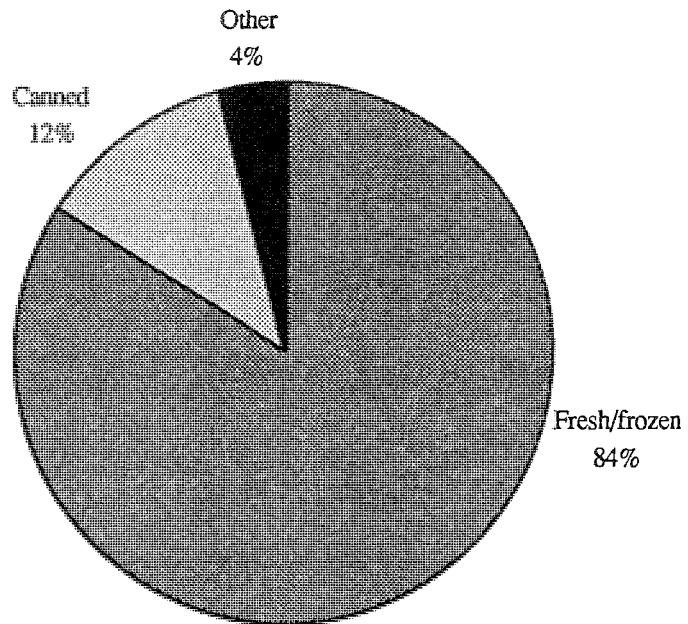
101 respondents offered 101 responses for May 1991 and September 1991 survey (see Question 16b, Appendix I).

Figure 3.9.3: Value of Weekly Caterers' Sales due to Fish/Seafood Products



101 respondents offered 101 responses for May 1991 and September 1991 survey (see Question 16b, Appendix I).

Figure 3.9.4: Percentage of Weekly Fish and Seafood Sales Coming from Fresh/Frozen, Canned or other Product Types



101 respondents offered responses for May 1991 and September 1991 surveys (see Question 16c, Appendix I).

4. Detailed Findings - Restaurants, Social and Sporting Clubs, Hotels, Motels

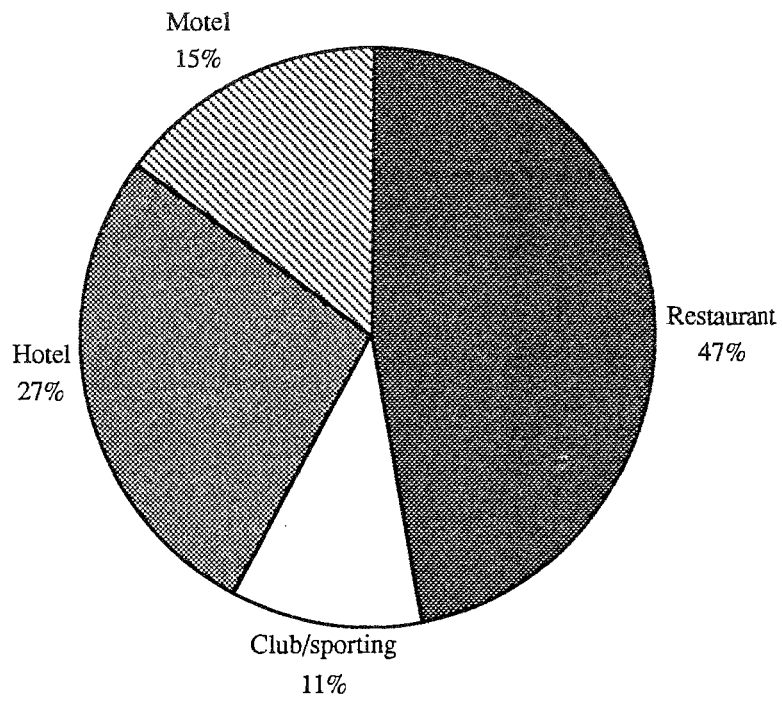
4.1 'Restaurants' - Type, Position of Respondents

As a simplification, the four types of establishments examined in this segment of the survey for out-of-home consumption via trade activities will be discussed as 'restaurants'. In fact restaurants comprised 47% of the survey base, with sporting and social clubs, hotels and motels contributing 11%, 27% and 15% respectively, by number (Figure 4.1.1).

In total, 202 'restaurants' were sampled across the cities of Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart in proportion to national demographics, as for the fish "outlets" considered in previous sections.

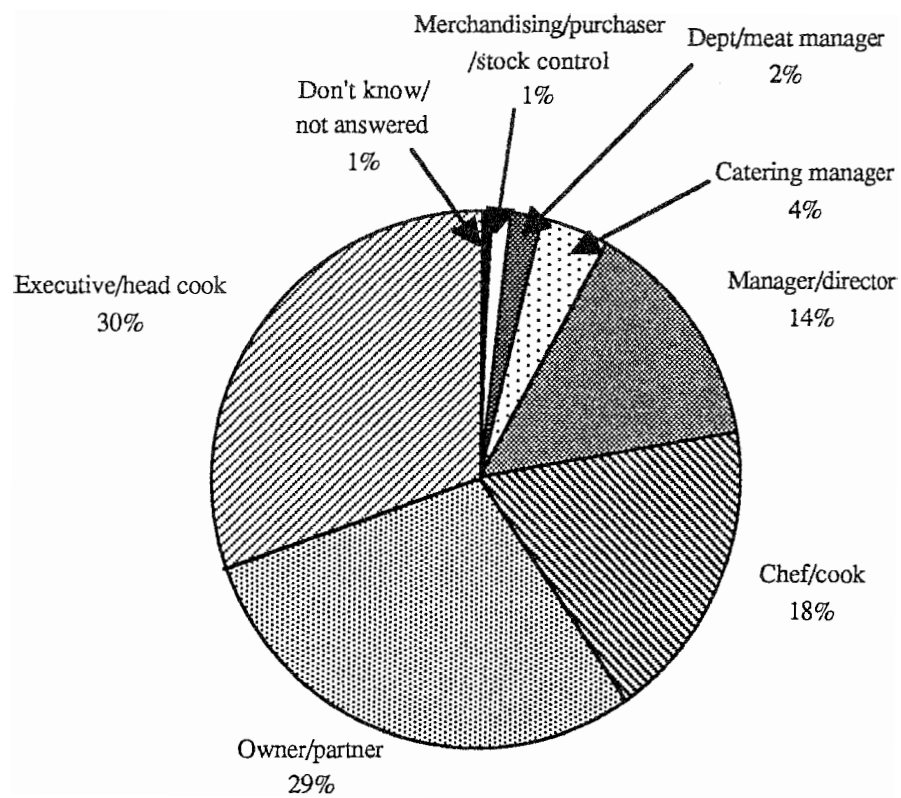
The positions held by respondents to 'restaurant' questionnaires were more diverse than for previous outlets for out-of-home or in-home consumption of fish. Nevertheless, respondents were in positions which would have the combination of knowledge and decision-making responsibility sought for detailed responses. Managers/directors plus owner/partners together made up 44% of respondents, with executive (head) cooks, chefs and cooks and catering managers together constituting 52% (Figure 4.1.2).

Figure 4.1.1: Types of Establishments Sampled as 'Restaurants'



202 stores were sampled for May 1991 and September 1991 surveys

Figure 4.1.2: Positions Held by Respondents to 'Restaurant' Questionnaire



202 businesses were sampled for May 1991 and September 1991 surveys (see Question 1a, Appendix II).

4.2 Type of Business - Initial Data

The majority of 'restaurants' (92%) had buying responsibilities for the one organisation only; of the remainder, more than half had buying responsibility for two outlets and only one was responsible for six or more outlets (Question 1b, c, Appendix II).

Against this background of purchasing independence, 79% of respondents said they were not part of any buying group (for fish/seafood or any other goods); 18% were part of a buying group for all items, whereas 2% were in buying groups for fish and seafood items only (Question 1d, e, Appendix II).

4.3 'Restaurants' Perceptions of Protein Sources

Like retailers and caterers, 'restaurant' proprietors are in a position to make decisions about the protein sources which are offered to customers. Thus, their perceptions about a range of protein sources including fish and seafood products were sought (Question 2, Appendix II). These have been analysed in greater detail by correspondence analysis algorithms and will be discussed later (Section 6). However, some simple observations on the responses are made here.

Homogeneity of responses for May 1991 and September 1991 Surveys

Some differences in emphasis were apparent between responses of May 1991 and September 1991 surveys, but these were not dramatic. Respondents in the May 1991 survey held that the statement "its quality varies" was more suited to fresh/frozen fish than meat (50 versus 46 responses out of 178), whereas the September 1991 survey reversed this order (52 versus 46 out of 171, favouring meat). Minor differences between surveys such as this occurred for five of the twenty three statements offered, ie:

- supply often cannot be guaranteed
- takes up little storage space
- preferred by more of my customers
- suits the menu offered
- its quality varies.

Provides a good margin

Poultry was perceived by 'restaurant' respondents as providing the best margin, with meat the second favoured option (29.3% and 26.7% of responses, respectively). Fresh or frozen fish (19.1% of responses) was more frequently associated with the statement than pork; prepared fish products and canned fish and seafood had poor responses (4.7% and 4% respectively).

Well supported by advertising

Respondents strongly associated this statement with meat (24.9% of responses). Fresh or frozen fish (14.1% of responses) was less frequently linked to it than pork or poultry, while prepared fish products and canned fish and seafood were seen as poorly supported (5.8% and 5.3% of responses respectively).

Supply often cannot be guaranteed

Responses were divided on this statement, with fresh/frozen fish marginally favoured over "none" (42.5% and 39.9% of responses, respectively).

Is often too expensive

This statement was most frequently perceived as applying to "fresh/frozen fish" (39% of responses). "None" was the next most frequently cited response (33%), but "fresh/frozen fish" drew more than three times as many responses as all non-fish protein categories (meat, pork, poultry) combined.

Offers good value for money

Respondents most frequently associated this statement with meat, though poultry and fresh/frozen fish were also well supported (26.3%, 25% and 20.9% of responses respectively). Perceptions for prepared fish products and canned fish and seafood were relatively poor (5.2% and 5.4% respectively).

Likely to go off/be thrown out

Fresh/frozen fish was strongly associated with this statement ahead of other options (34.1% of responses) whereas prepared fish products and canned fish and seafood were not (5.8% and 4.2% of responses, respectively).

Presents a problem in waste disposal

The most frequent perception was that this applied to none of the protein sources (66.4% of responses). However, respondents did associate this statement with fresh or frozen fish (11.5% of responses) ahead of any other protein source.

Staff dislike preparing/cooking it

The predominant opinion was that this applied to none of the protein sources (74.1% of responses). Fresh or frozen fish was associated with the statement more frequently (10.4% of responses) than any other protein source.

Don't have knowledge to prepare/cook it

Again, this statement was most frequently held to apply to none of the protein sources (81.9% of responses). Fresh or frozen fish was more frequently associated with it (7.4% of responses) than any other protein source.

Takes up little storage space

Opinion was evenly divided over whether this statement best fitted fresh or frozen fish, canned fish and seafood or none of the protein sources (18.6%, 18.3% and 19.2% of responses, respectively).

Is considered too dear by customers

'Restaurants' most frequently considered that this applied to none of the protein sources offered (41.8% of responses). Fresh or frozen fish, meat, and canned fish and seafood were the protein sources most frequently associated with this statement (25.4%, 10.2% and 9% respectively).

Difficult to buy in right sized portions

The most frequent perception was that this statement applied to none of the protein sources (61.5% of responses). Fresh or frozen fish was the protein source most frequently associated with the statement (22% of responses).

Preferred by more of my customers

Whilst meat was most frequently perceived as fitting this description (38% of all responses), the statement was frequently considered quite apt for fresh/frozen fish (32% of responses).

Can be reused later

This statement was most frequently associated with none of the protein sources but meat was the second most favoured association (30.5% and 25.7% of responses, respectively). Fresh or frozen fish, prepared fish products and canned fish and seafood were infrequently associated with this attribute (5.1%, 2.7% and 3.6% of responses, respectively).

Don't have knowledge to buy confidently

Again, this statement was most frequently perceived as suiting none of the protein sources (68.2% of responses). Fresh or frozen fish received twice as many responses (8.6%) as meat, pork or poultry.

Easily available to buy

This statement was associated with meat and poultry (19.9% and 19.4% of responses) a little more frequently than pork and fresh/frozen fish (17.2% and 15.9% of responses).

Easy to prepare

There was little discrimination between meat, fresh/frozen fish and poultry on this statement (frequency of responses being 19.3%, 18.8% and 18.4% respectively).

Suits the menu

Again, respondents thought that this statement applied fairly equally to meat, fresh/frozen fish and poultry (22.6%, 22.3% and 21.6% of responses, respectively).

Its quality varies

Respondents attributed this statement to meat and fresh or frozen fish with almost equal frequency (28.1% and 27.5% of responses, respectively), with poultry and pork receiving just under one third of the responses of the two former protein sources.

Prices fluctuate too much

The most frequent perception was that this statement applied to fresh/frozen fish (47% of responses).

An essential part of the range offered

Most frequently this statement was associated with meat (26.7% of responses), with fresh or frozen fish being the second most frequent association (24.2%). Perceptions that it applied to prepared fish products or canned fish and seafood were infrequent (5.9% and 6.1% respectively).

Looks good on the plate

Respondents most frequently associated this statement with fresh/frozen fish, and meat (23.1% and 22.5% of responses, respectively). Prepared fish products and canned fish and seafood were least frequently linked with this attribute (9% and 8.6%, respectively).

Suited to microwave cooking

This statement was strongly associated with none of the protein sources (52.3% of responses). However, of the protein sources, fresh or frozen fish was most frequently associated with the statement (11.2% of responses).

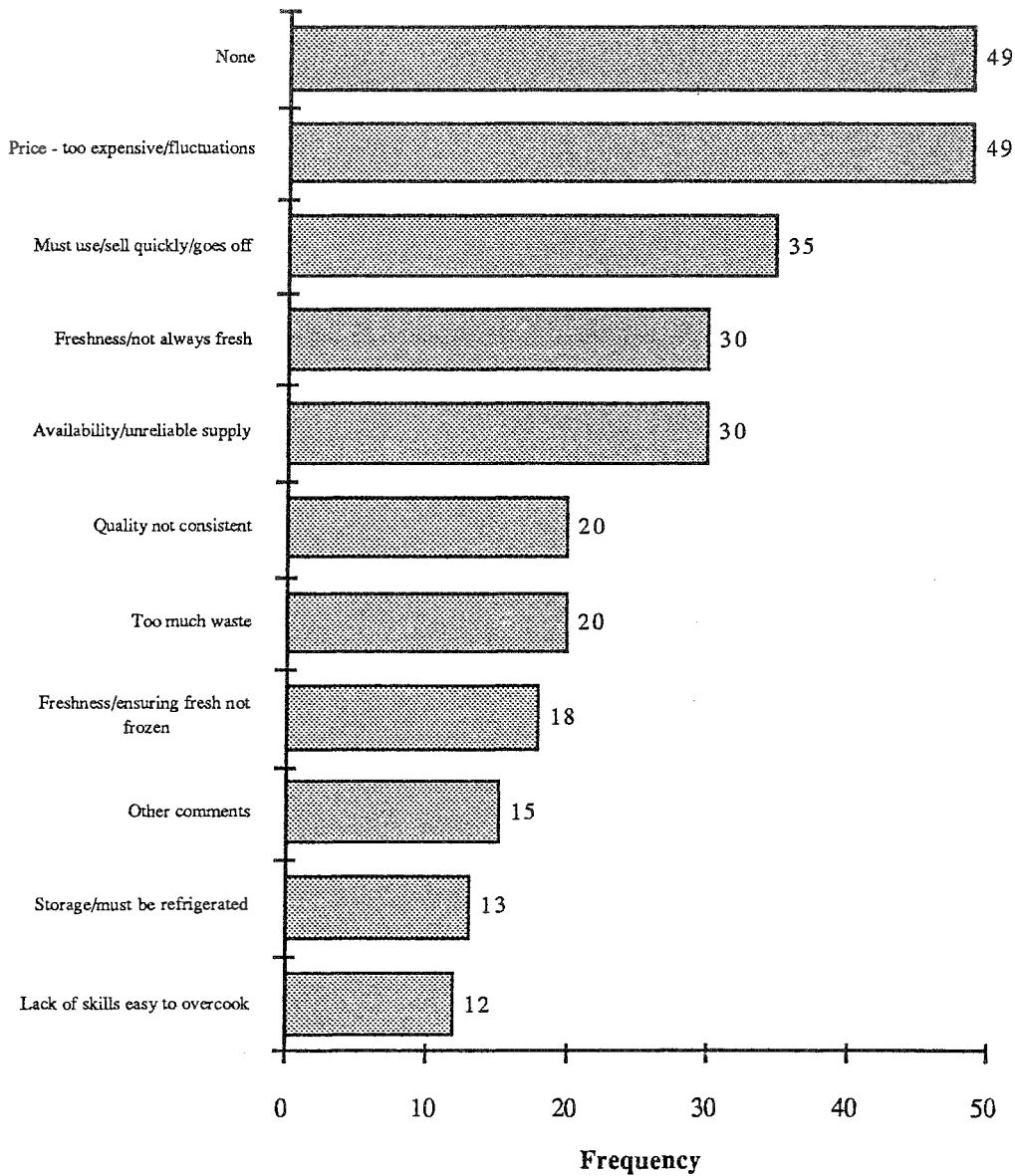
4.4 Fish and Seafood Meals - Problems

Of the businesses surveyed in this part of the study, 98% of 'restaurants' confirmed that they currently offered fish/seafood dishes (Question 3a, Appendix II). The most frequent reason for currently **not** selling fish or seafood dishes was a lack of customer demand, although these 'restaurants' had sold fish and seafood dishes in the past.

'Restaurant' respondents' level of satisfaction in preparing and selling fish and seafood meals was high, since the most frequent response when asked to give specific problems, was "none" (Question 4a, Appendix II). With the same level of frequency, 'restaurants' cited the price of fish and seafood and its tendency to fluctuate as a problem (Figure 4.4.1). Perishability, freshness, supply and inconsistent quality were additional problems mentioned with lower frequency.

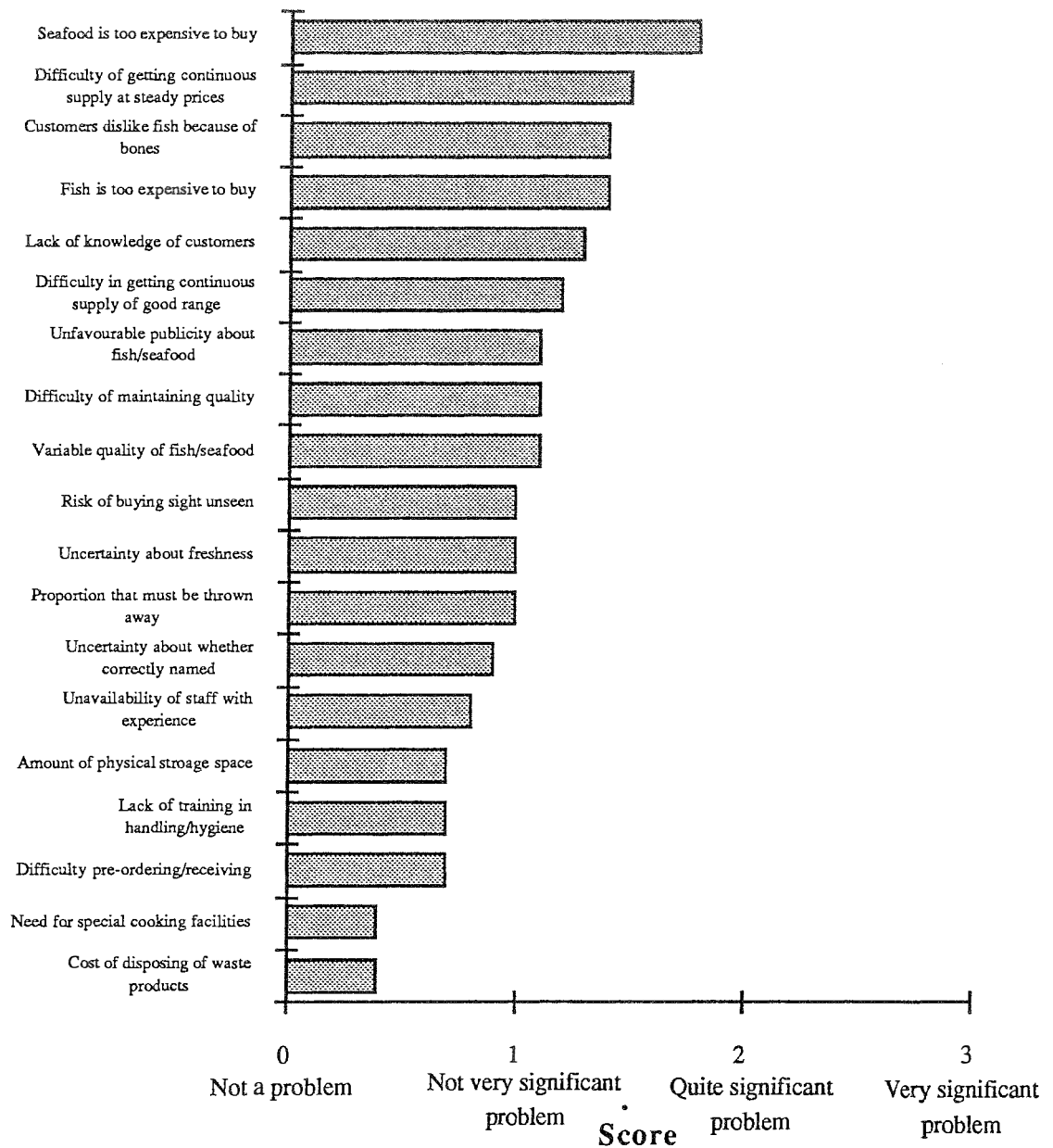
Concern voiced over price and supply were reinforced when 'restaurants' were subsequently asked (Question 4b, Appendix II) to indicate just how significant a range of problems were which had been uncovered through a prior phase of the study (Industry Leader Interviews), (Figure 4.4.2). The implicit finding, that on average nothing is a "very significant problem", is consistent with data in Figure 4.4.1, where "none" ranked equally with price as the most frequently cited problem.

Figure 4.4.1: Restaurants' Main Problems in Preparing/Selling Fish /Seafood



202 respondents offered 338 responses for May 1991 and September 1991 surveys. Only the top 80% most frequently cited responses are shown. A further 11 'problems' were cited less frequently (see Question 4a, Appendix II).

Figure 4.4.2: Degree of Problem in Selling Fish/Seafood in Restaurants



202 respondents offered responses on each of 19 'problems' for May 1991 and September 1991 surveys (see Question 4b, Appendix II).

4.5 Fish and Seafood Sales - Types, Formats, Volumes, Origins

The leading types of fish and seafood prepared by 'restaurants' (Question 5a, Appendix II) had a high degree of correspondence with those for caterers (Section 3.5). Illustrative of the variety of finfish used by 'restaurants' is the finding that the leading eight types sold accounted for 47% of responses offered for a range of 76 fish species/types (Table 4.5.1).

Snapper was the fish type most frequently bought by 'restaurants'. In contrast to other frequently bought species, it tended to be bought whole rather than as a fillet; nevertheless, it could be sold as fillet.

Table 4.5.1: Eight Main Types of Finfish sold by 'Restaurants' in Preceding Month, Preferred Format purchased by 'Restaurants' and Presumed Origin

Type of Finfish	Rank	Frequency of Response ⁽¹⁾	Preferred Form bought ⁽²⁾ (Frequency)	Origin - weighted average estimate (% local/ Australian)
Snapper	1	70	Whole (51/86)	87.6%
Orange roughy ⁽³⁾	2	59	Fillet (55/60)	85.8%
Barramundi	3	56	Fillet (49/64)	80.4%
Whiting (unspecified) ⁽⁴⁾	4	50	Fillet (45/55)	93.7%
Blue eye	5	37	Fillet (31/42)	97.6%
Perch (unspecified)	6	32	Fillet (27/34)	81.5%
John dory	7	27	Fillet (21/29)	74.1%
Trevally ⁽⁵⁾	8	27	Fillet (24/27)	97.6%

⁽¹⁾ 202 respondents offered 742 responses for May 1991 and September 1991 surveys for a total of 76 fish species/types

⁽²⁾ Alternative forms considered were: live, whole, fillet, cutlet, headed/gutted, smoked, other

⁽³⁾ Orange roughy data may be understated, since the species is commonly known as sea perch in NSW. These responses would be captured under perch (unspecified)

⁽⁴⁾ Does not include 1 response on grass whiting, 5 on King George whiting, 1 on English whiting and 1 on sand whiting

⁽⁵⁾ One specific reference made to blue's liver warehou is included; respondents made no specific reference to silver trevally (skippy)

Responses indicate that about 75% or more of the finfish prepared in 'restaurants' was caught in Australian waters (see Question 8, Appendix II).

Analysis of the data on the frequency of finfish species/types sold by 'restaurants' according to region or type of outlet showed no statistically significant inter-city or inter-'restaurant' differences. Nevertheless, the frequency with which the leading fish types were sold in each of the cities sampled is of interest (Table 4.5.2), in particular barramundi in Brisbane, whiting in Adelaide, blue eye in Hobart and snapper in Sydney/Perth.

Table 4.5.2: Leading Finfish Species/Types Sold by 'Restaurants', According to Location

Leading Finfish Species/Types	Frequency of Responses, by City					
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Snapper	36	10	5	6	13	0
Orange roughy ⁽¹⁾	14	21	13	6	0	5
Barramundi	18	4	20	6	8	0
Whiting (unspecified) ⁽²⁾	8	14	10	16	2	0
Blue eye	17	13	0	0	0	7
Perch (unspecified)	21	1	1	2	3	4
John dory	19	4	1	0	2	1
Trevally	3	17	0	1	0	6

(1) Orange roughy data may be understated, since this species is commonly known as sea perch in NSW. Such responses would be recorded as perch (unspecified)

(2) Does not include 1 response for grass whiting (Melbourne), 5 for King George whiting (Sydney 1, Melbourne 3, Perth 1), 1 for English whiting (Melbourne) and 1 for sand whiting (Adelaide).

The leading eight types of seafood sold by 'restaurants' accounted for 80% of all responses relating to sales of 43 seafood species/types (Table 4.5.3).

Prawns were by far the most frequently bought type of seafood. Other frequently bought species had a high degree of overlap with the caterer's list. The preferred form for purchasing seafood was species-specific; whilst 'restaurants' tended to buy leading seafood items whole, some such as squid/calamari were purchased in forms more convenient for the menus under consideration. A level of around 50% of imports was far more prevalent for popular seafood types (scallops, mussels, squid/calamari).

Table 4.5.3: Eight Main Types of Seafood Sold by 'Restaurants' in the Preceding Month, Preferred Format Purchased by 'Restaurants' and Presumed Origin.

Type of Seafood	Rank	Frequency of Response ⁽¹⁾	Preferred Form bought ⁽²⁾ (Frequency)	Origin - weighted average estimate (% local/Australian)
Prawns	1	163	Whole (110/189)	78.2%
Oysters	2	93	Whole (53/91)	94.8%
Scallops	3	83	Whole ⁽³⁾ (39/81)	57%
Squid/calamari	4	83	Other (45/85)	52%
Mussels (unspecified)	5	47	Whole (32/46)	51.1%
Crayfish (unspecified)	6	43	Whole (35/50)	97.8%
Crab (unspecified)	7	18	Whole (16/19)	94.4%
Octopus	8	18	Whole (15/18)	66.7%

(1) 198 respondents offered 649 responses for May 1991 and September 1991 surveys for a total of 43 seafood species/types

(2) Alternative forms considered were: live, whole, fillet, cutlet, headed/gutted, smoked, others

(3) This would seem to overstate the proportion of scallops sold as whole (in shell) and may result from misinterpretation of the term "whole" as applied to this species.

Regional data on the sales of seafood by 'restaurants' are summarised in Table 4.5.4; sales of the leading eight seafood types show no significant differences from the expected distribution.

Table 4.5.4: Leading Seafood Species/Types Sold by 'Restaurants', According to Location

Leading Seafood Species/Types	Frequency of Responses, by City					
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Prawns	59	32	29	19	16	8
Oysters	39	17	16	8	6	7
Scallops	23	23	11	9	9	8
Squid/calamari	30	15	9	15	10	4
Mussels (unspecified)	18	13	3	3	7	3
Crayfish (unspecified)	21	7	0	5	6	4
Crab (unspecified)	10	1	5	0	2	0
Octopus	15	1	1	0	1	0

Information on the quantities in which 'restaurants' typically buy fish and seafood is of marketing relevance. Data on the actual volumes (kg) of fish and seafood species/types bought by 'restaurants' are presented here in two ways, as in previous sections. First, unaggregated data for May 1991 and September 1991 surveys have been analysed so as to illustrate the most frequent volume ranges in which 'restaurants' made their purchases (Figures 4.5.1 and 4.5.2). Finfish was most commonly bought in a 6kg to 10kg weight range, although some purchases were for quantities in excess of 500kg. The most common purchase quantity for seafood items was somewhat lower, caused by more frequent purchases in the 1kg to 5kg range than for finfish. In qualitative terms, there appears to be no substantial change in the overall volumes of fish and seafood purchased between the two survey periods. The major deviation from the purchasing pattern was the 11kg to 15kg range for seafood in the later survey. 'Restaurants' not only made about twice as many purchases of the species/types bought in the May 1991 survey, but purchased several additional species/types as well.

Aggregated data which include the number of species/types of fish or seafood which contributed to the volumes purchased are shown in Figures 4.5.3 and 4.5.4. It is apparent that a greater variety of fish types make up the purchased quantities than for seafood, even for the lower weight ranges.

A second way of examining the data on volumes of fish and seafood purchased is by individual species. Data on the volumes of leading fish and seafood purchased during the two survey periods are presented in Tables 4.5.5 and 4.5.6, respectively. Whilst data were gathered for 71 fish types, Table 4.5.5 covers only 27 types for which the volumes reported in either survey exceeded 200kg. Similarly the list of seafood types has been reduced from 37 to 19 in Table 4.5.6, by considering only those for which volumes reported in either survey exceeded 100kg.

Table 4.5.5: Leading Finfish Types purchased by
'Restaurants' in the Month Prior to Survey⁽¹⁾

Species/Type of Finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Barramundi	1,498	53.5	1,526	42.4
Blue eye	1,516	68.9	1,168	58.4
Dhufish	145	36.3	417	83.4
Dory, John	350	26.9	1,338	83.6
Dory smooth	324	108.0	0	0
Emperor, red	315	45.0	213	21.3
Flathead	313	44.7	1,019	84.9
Flounder	460	51.1	32	16.0
Hake	770	85.6	2,636	202.8
Jewfish	150	16.7	407	37
Kingclip	386	38.6	255	51.0
Kingfish	315	105.0	140	46.7
Leatherjacket	0	0	240	240.0
Orange roughy ⁽²⁾	804	26.8	1,620	54.0
Perch, ocean/coral	180	60.0	360	180.0
Perch, Nile	365	121.7	0	0
Perch (unspecified)	729	52.1	1,056	52.8
Plaice	80	80.0	290	145.0
Salmon, Atlantic	205	41.0	508	36.3

Continued

Table 4.5.5 continued

Species/Type of Finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Salmon, Australian	16	8.0	231	46.2
Snapper	1,701	37.8	2,272	55.4
Sole, lemon	283	47.2	55	13.8
Trevally ⁽³⁾	205	22.8	551	30.6
Trout, coral	327	36.3	528	48.0
Trout, ocean	35	11.7	305	50.8
Trout (unspecified) ⁽⁴⁾	446	40.5	217	15.5
Tuna (unspecified)	41	13.7	511	63.9
Whiting (unspecified) ⁽⁵⁾	929	34.4	848	30.3

(1) An arbitrary cut off point of over 200kg total volume purchased in either survey was applied for inclusion in the Table.

(2) Data on orange roughy may be understated, since this species is also commonly known as sea perch in NSW. Such responses would be recorded as perch (unspecified)

(3) includes the specific reference to 10kg bluesilver warehou reported in the September 1991 survey

(4) trout (unspecified) does not include specific responses on rainbow trout (149kg and 31kg total volumes purchased in respective surveys) or on smoked trout (50kg and 20kg total volumes purchased in respective surveys)

(5) Whiting (unspecified) does not include specific responses on grass whiting (0,40kg), King George whiting (95kg, 87kg) or sand whiting (0,50kg) total volumes reported in May 1991 and September 1991 surveys (respectively).

**Table 4.5.6: Leading Seafood Types purchased by
'Restaurants' in the Month Prior to Survey⁽¹⁾**

Species/Type of Seafood	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Bugs	236	23.6	1,034	49.2
Crab (unspecified)	546	49.6	993	124.1
Crayfish (unspecified)	1,495	62.3	2,246	86.4
Cuttlefish	0	0	110	55.0
Mussels (unspecified)	989	47.1	648	25.9
Octopus	218	31.1	798	72.5
Oysters	286	6.5	818	17.4
Prawns	6,298	71.6	4,614	49.1
Prawns (cutlet/raw/import)	16	16.0	194	48.5
Scallops	1,197	29.2	1,372	34.3
Squid/calamari	1,482	36.1	2,048	44.5
Seafood marinara	1,045	174.2	20	20.0
Shrimp, cooked and peeled	336	37.3	159	26.5
Salmon, smoked pieces	51.2	6.4	122	15.3

(1) An arbitrary cut off point of over 200kg total volume purchased in either survey was applied for inclusion in the Table

Matching of the rankings for frequency of purchase by 'restaurants' with volumes purchased for fish and seafood is not exact (Tables 4.5.1 versus 4.5.5 and Tables 4.5.3 versus 4.5.6). Whiting is bought in lower volumes than their popularity ranking might suggest. This probably reflects the small portion size of this fish in restaurants.

As an indication of 'restaurant' respondents' preference for a particular fish and seafood supply route, 'restaurants' were asked to specify the type of supplier used to supply each species/type of fish and seafood bought in the month preceding the survey (Question 7b, Appendix II). The popularity of a particular type of supplier (commercial fisherman/aquaculture farmer, general wholesaler, fish/seafood wholesaler/co-operative, wholesale fish market, or retailer) was then gauged by summing the number of times a particular type of supplier was referred to. (This is referred to as "frequency of use", and is analogous to adding all the separate items on everybody's shopping lists who shop at a particular type of store.)

An indication of the *range* of fish and seafood business done by a particular type of supplier was gained by summing the number of distinct species handled by a supplier type, irrespective of the number of purchasers of that species/type (bracketed figures in Table 4.5.7).

The principal type of supplier of fish and seafood to 'restaurants' was the general wholesaler, but co-operatives and fish markets were also used frequently (Table 4.5.7). These three suppliers account for almost 90% of the 'restaurants' usage of suppliers.

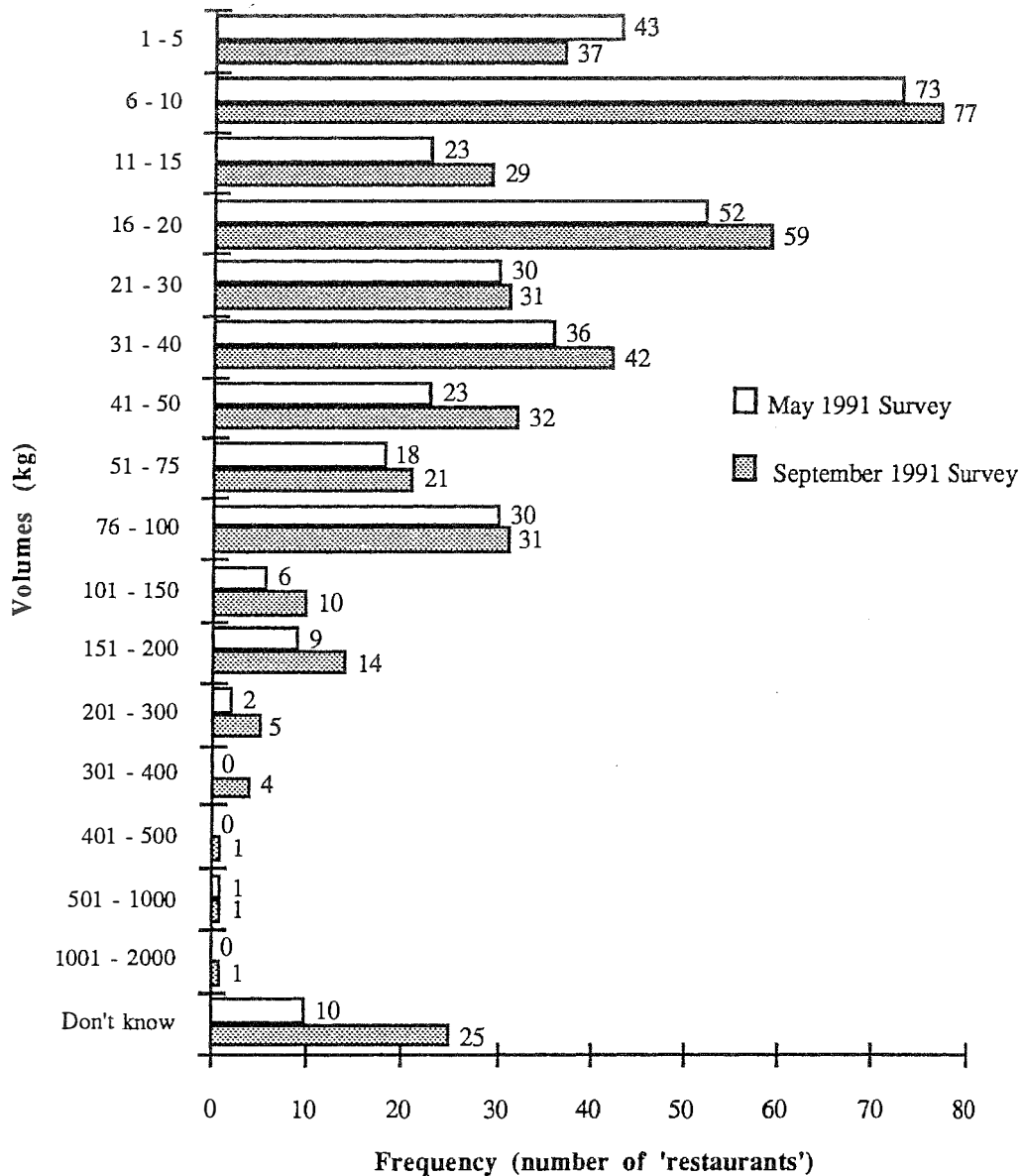
Table 4.5.7: The Relative Frequency That 'Restaurants' Used Certain Suppliers of Fish/Seafood and Range of Species Handled by Each Supplier Type*

	Frequency of use for:	
	Fresh or Frozen Fish ⁽¹⁾ (Number of Species)	Seafood ⁽¹⁾ (Number of Species)
Commercial fisherman/ aquaculture farm	2.2% (13)	2.8% (9)
General wholesaler	36.4% (47)	41.0% (35)
Fish/seafood wholesaler/ co-operative	29.2% (46)	26.9% (22)
Wholesale fish market	23.8% (45)	20.0% (24)
Retailer	7.6% (29)	6.9% (19)
Other	0.6% (5)	1.9% (11)
Don't know		0.3% (2)
No answer	0.1% (1)	0.3% (1)
Totals	100%	100%

(1) respondents offered 780 and 700 responses on fish and seafood across the May 1991 and September 1991 surveys (see Question 7b, Appendix II)

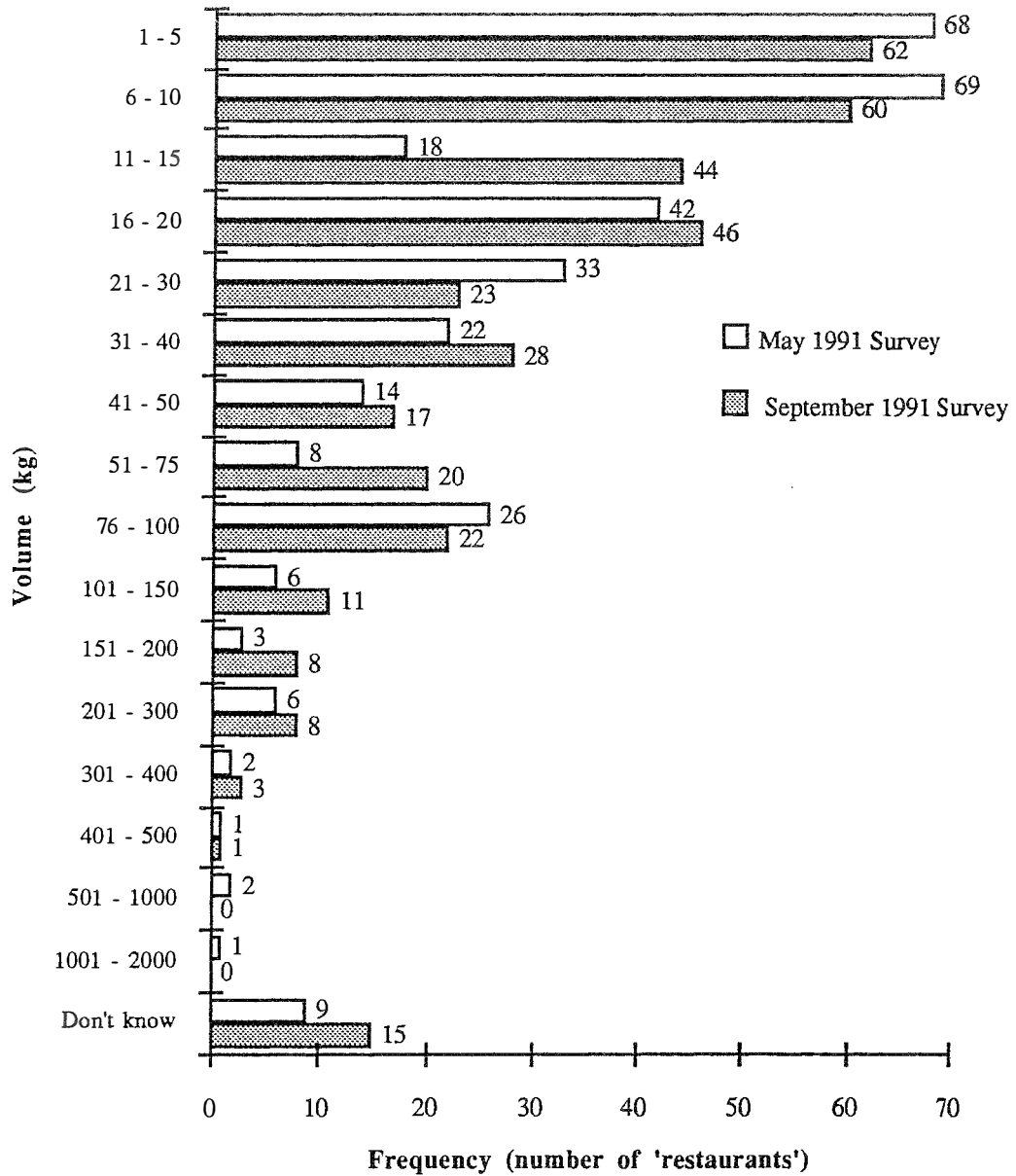
As a check on the data supplied (Question 9a, Appendix II), respondents were asked to estimate what proportion of the total amount spent by the 'restaurant' on fish and seafood was accounted for by the species/types discussed. On average respondents estimated this proportion to be 87.1%.

Figure: 4.5.1: Number of 'Restaurants' Which Bought Particular Species/Types of Finfish in Different Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys



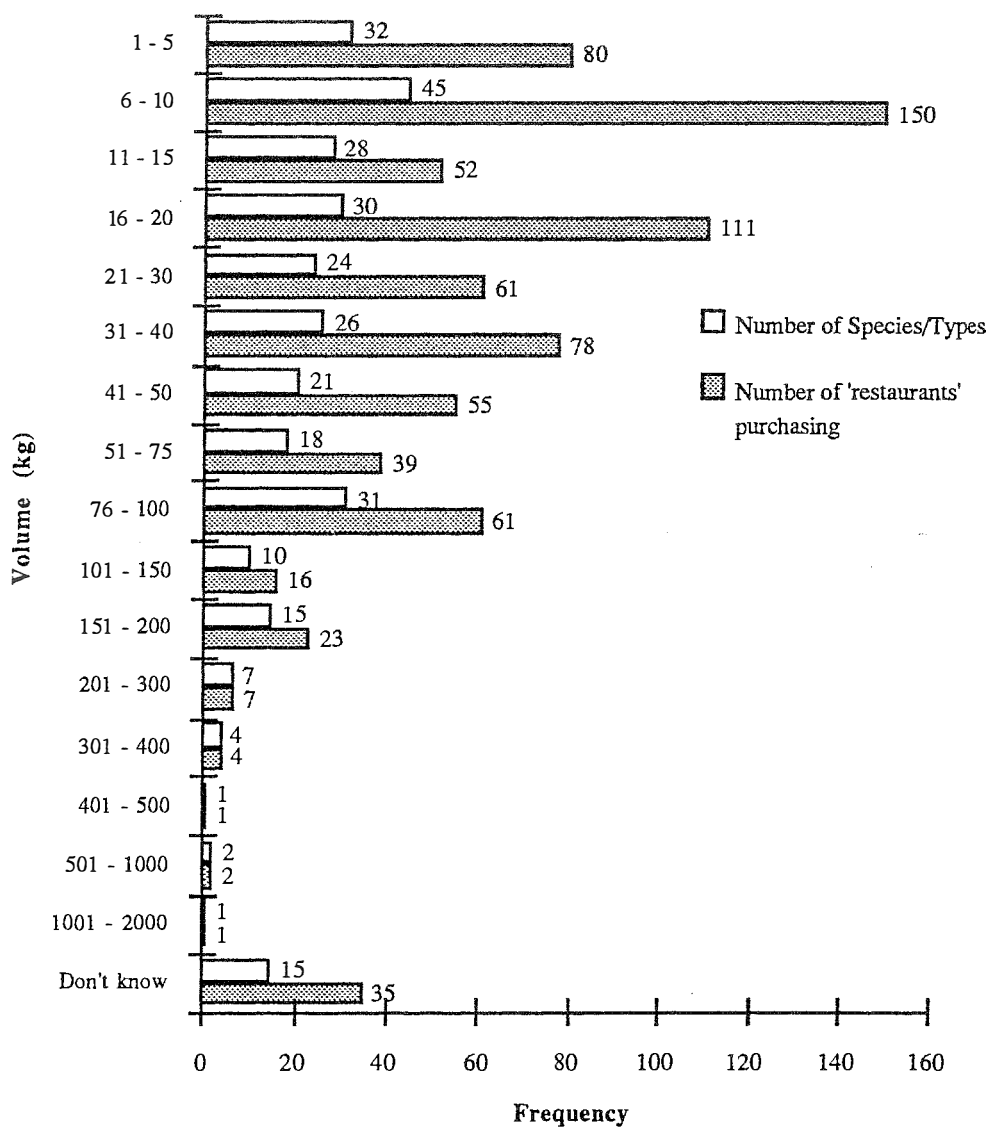
(see Question 7a, Appendix II)

Figure 4.5.2: Number of 'Restaurants' Which Bought Species/Types of Seafood in Different Weight Range Lots in the Month Preceding the May 1991 and September 1991 Surveys



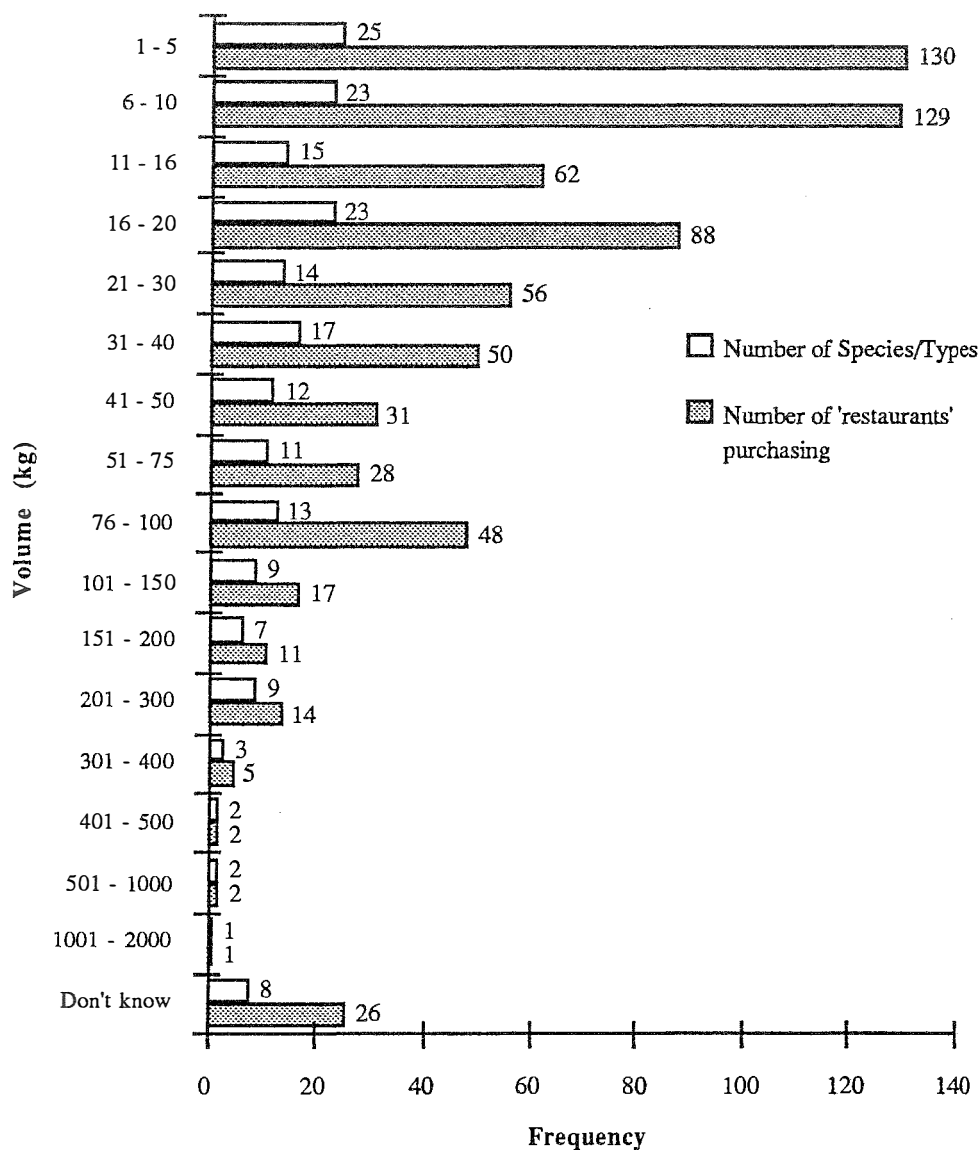
(see Question 7a, Appendix II)

Figure 4.5.3: Number of 'Restaurants' Which Bought the Shown Number of Species/Types of Finfish in Particular Weight Range Lots in the Month Preceding the May 1991 and September 1991 Surveys (data aggregated across both surveys)



Respondents offered 776 responses on 71 fish species/types for May 1991 and September 1991 surveys (see Question 7a, Appendix II).

Figure 4.5.4: Number of 'Restaurants' Which Bought the Shown Number of Species/Types of Seafood in Particular Weight Range Lots in the Month Preceding the May 1991 and September 1991 Surveys (data aggregated across both surveys)



Respondents offered 700 responses on 37 seafood species/types for May 1991 and September 1991 surveys (see Question 7a, Appendix II).

4.6 Stock Selection, Supplier Selection and Rating and Customers' Perceived Criteria

The basis whereby 'restaurants' selected their purchases of fish was established by asking respondents for the specific reasons why particular species/types were bought (Question 9b, Appendix II). The resulting data are presented in Figure 4.6.1. As for caterers' responses, the most frequent reason given for buying fish was the perception of customer preference. Aspects of price, taste, convenience, function, quality, ease of eating and presentation combined to make up around 80% of all responses but were each mentioned far less frequently than customer preference.

The three species/types, barramundi, snapper and whiting (unspecified) were the source of 35% of all responses relating to "popular/customers want/prefer". Hake was the source of 9% of all responses relating to "good price/cheaper/value for money"; orange roughy was the source of 13% of responses relating to "tasty/good flavour", 15% for "easy to cook/doesn't break up", 31% for "boneless/skinless" and 25% of responses on "good/light texture/milder flavour/white".

Snapper was the source of 16% of responses relating to "good quality" and 20% of responses relating to "looks good colour/attractive".

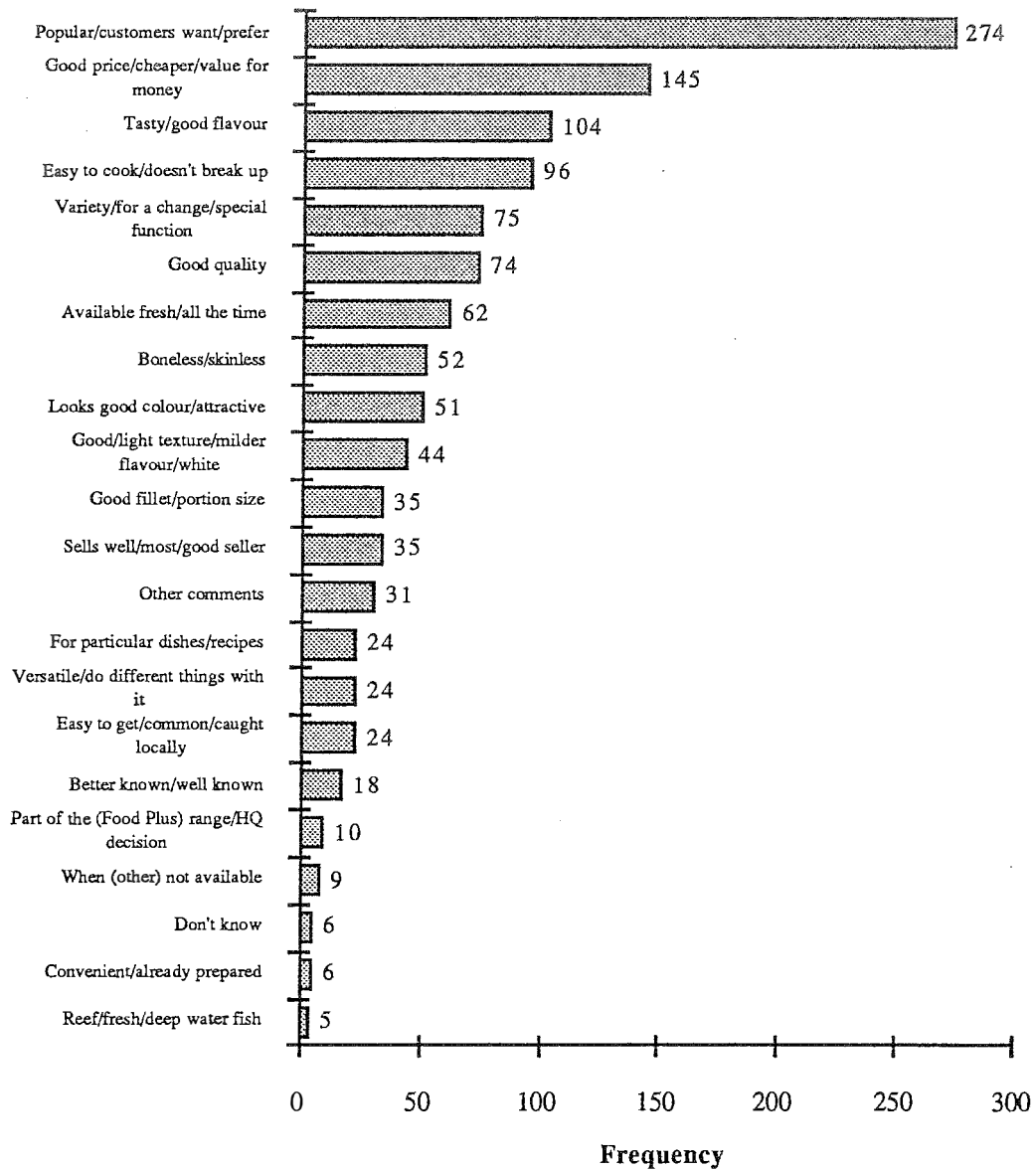
'Restaurants' currently offering fish and seafood dishes (98% of respondents) were then asked to comment on the importance of a range of 18 factors in making their choice of supplier (Question 10a, Appendix II). Almost all factors were seen as important, suggesting suppliers need to consider a range of 'restaurants' requirements (Figure 4.6.2). Most importance was assigned to the requirement that orders be promptly attended to. A related need which was also perceived as very important for the 'restaurant' business was that a supplier should have a reliable delivery service. As in other segments of this study, the emphasis on suppliers being honest and fair in doing business was very important. The demands on 'restaurants' to deliver a quality service was reflected in the importance which they attached to suppliers who demonstrated care for quality through factors such as:

- good temperature control
- clean outlet
- guarantee of fish being correctly named, and
- good reputation for quality fish/seafood.

'Restaurants' subsequently rated their main supplier against these same criteria (Question 10b, Appendix II; Figure 4.6.3); the degree of correspondence between the "ideal" state and the real situation suggests a high degree of satisfaction, generally.

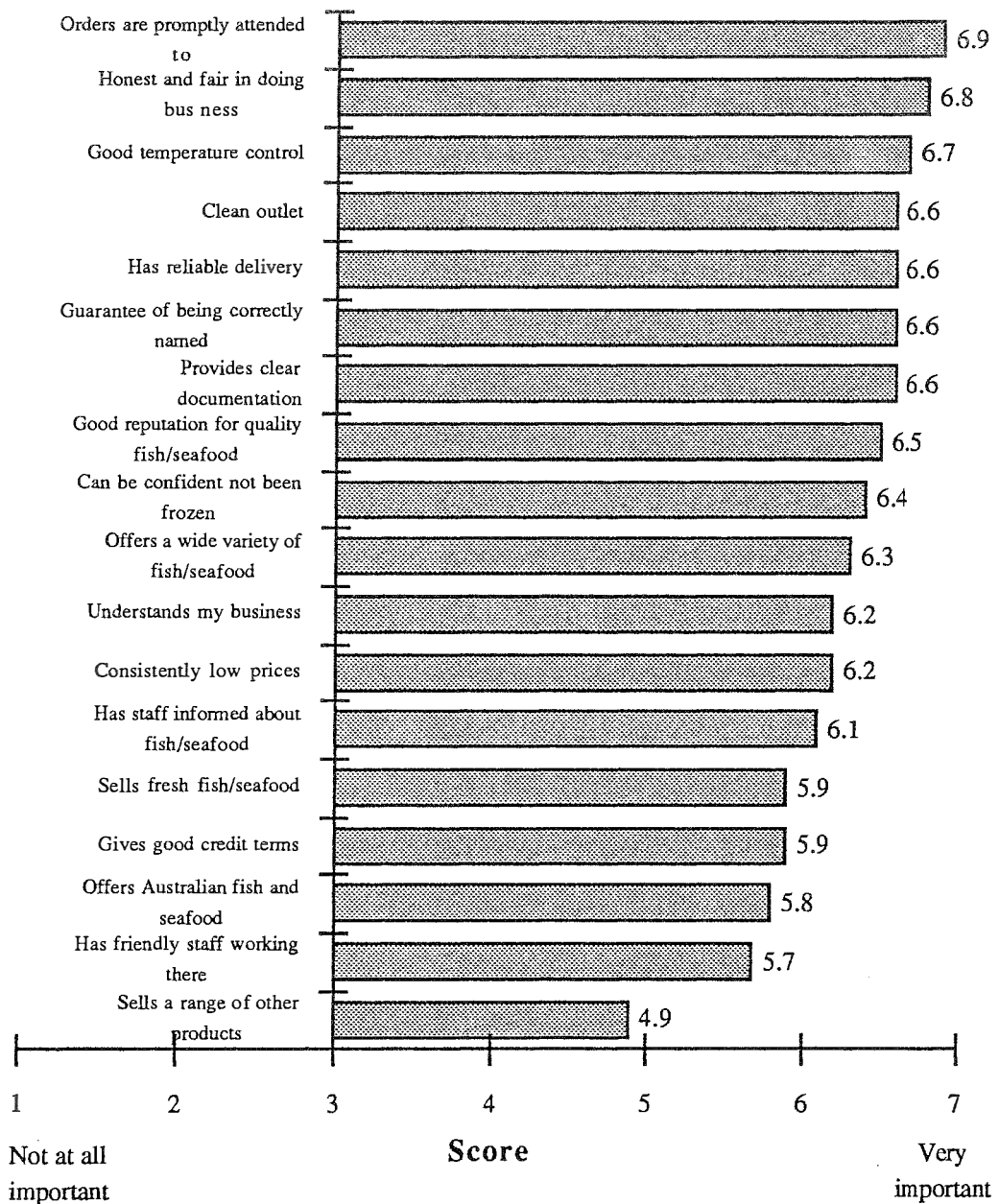
With this process of review still in mind, 'restaurants' were asked to think about what their customers look for in an outlet which sells cooked fish and seafood (Question 11, Appendix II). Respondents' comments on the degree of importance which they believe customers place on certain factors emphasised clean premises and a reputation for quality well ahead of alternative criteria (Figure 4.6.4).

Figure 4.6.1: 'Restaurants' Reasons for Purchase of Main Finfish



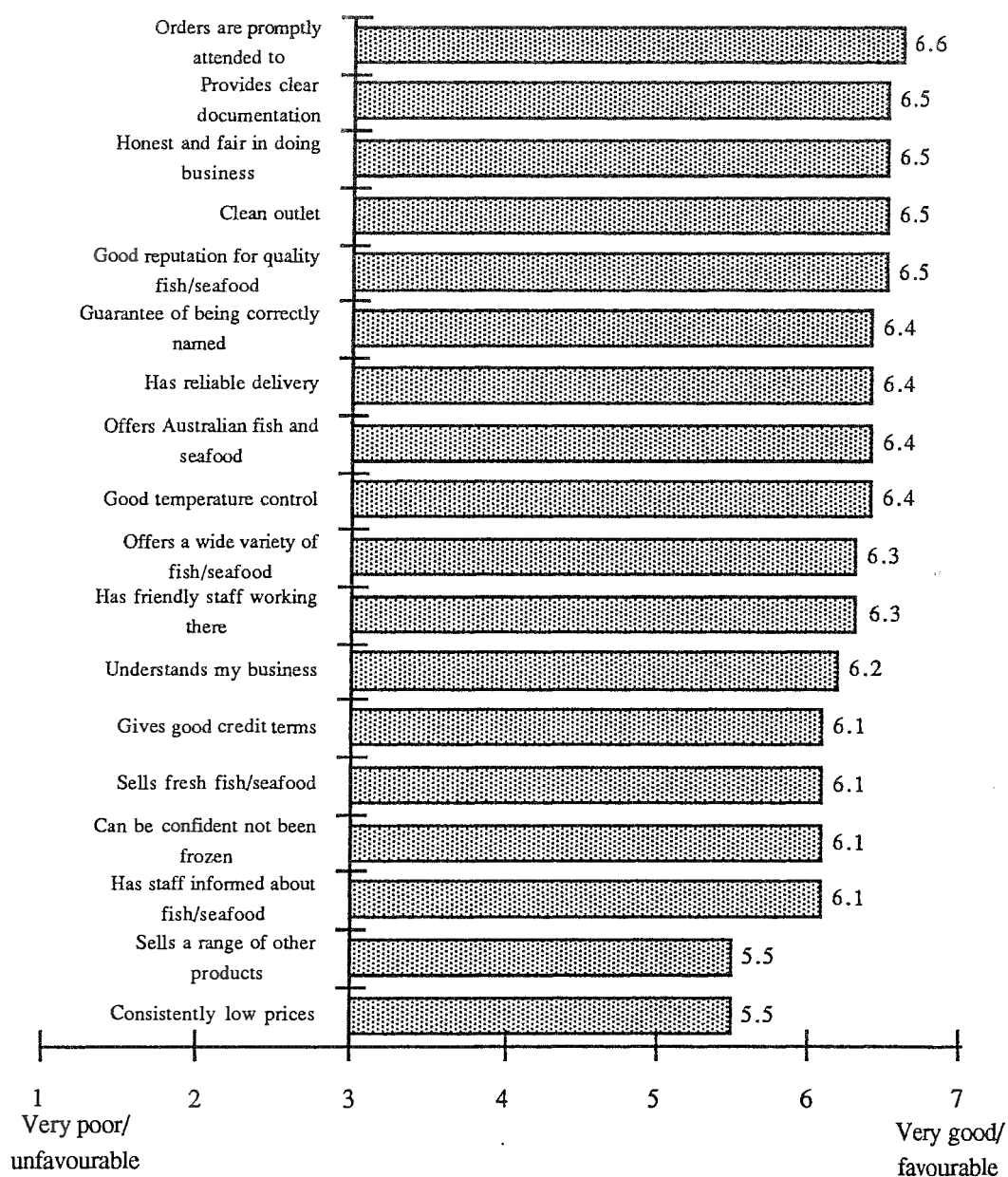
Respondents offered 1204 responses on 76 fish species/types for May 1991 and September 1991 surveys (see Question 9b, Appendix II).

Figure 4.6.2: Factors Important to 'Restaurants' When Choosing Supplier



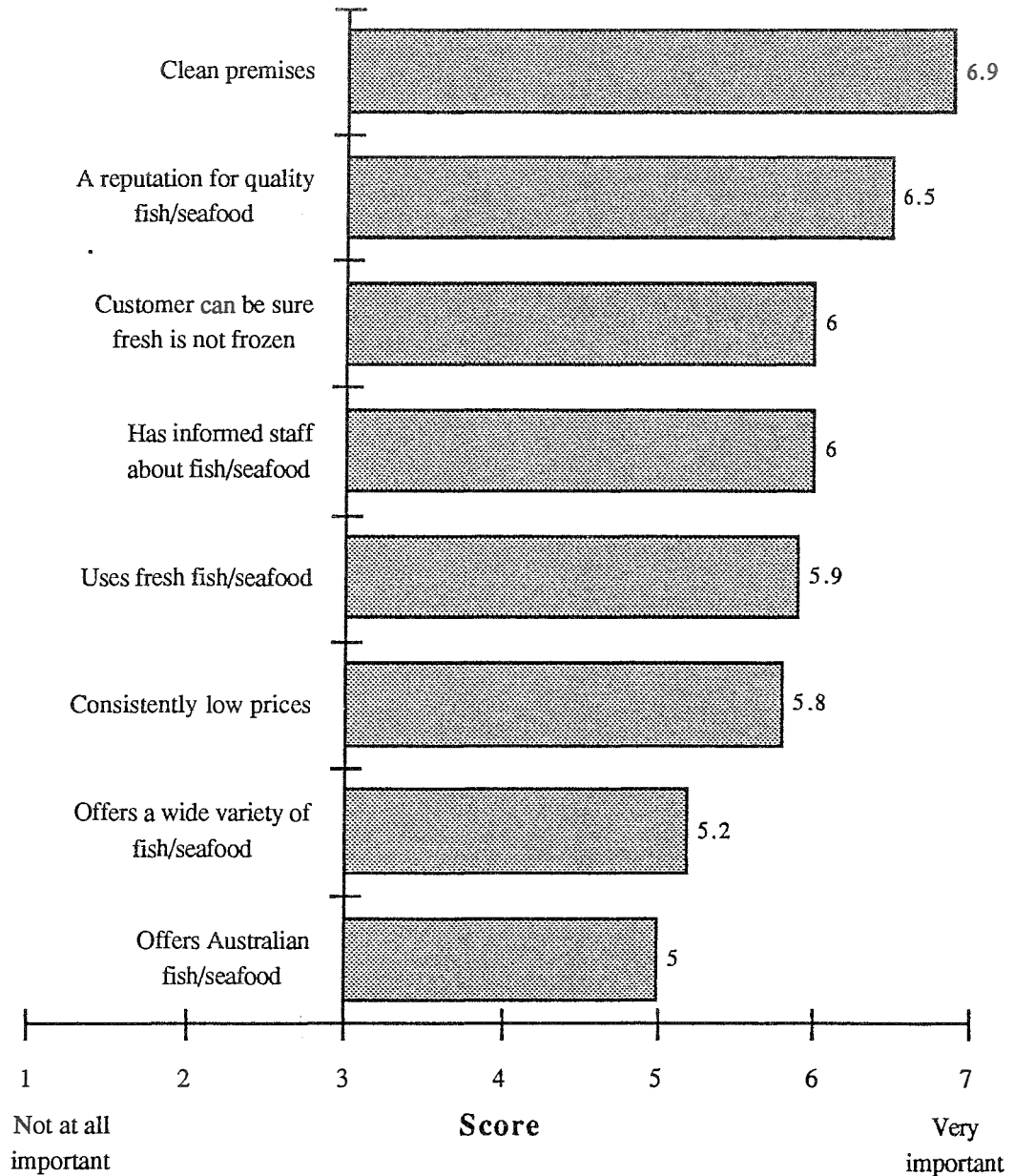
196 respondents offered ratings on each of 18 factors for May 1991 and September 1991 surveys (see Question 10a, Appendix II).

Figure: 4.6.3: 'Restaurants' Rating of Main Wholesale Supplier



196 respondents offered ratings on each of 18 factors for May 1991 and September 1991 surveys (see Question 10b, Appendix II).

Figure: 4.6.4: ‘Restaurants’ Views on Factors Which Customers Look for in an Outlet Which Sells Cooked Fish and Seafood



198 respondents offered ratings on each of 8 factors for May 1991 and September 1991 surveys (see Question 11, Appendix II).

4.7. Species/Types and Products for increased usage by 'Restaurants'

As a preliminary to discussing the potential of a range of wild and farmed species which the fishing industry regards as under-utilised, 'restaurants' were asked to comment on the prevalence of eight trends shown by their customers in the preceding 12 months (Question 12a, Appendix II).

Twice as many respondents agreed as disagreed that amongst their customers there was:

- more concern about their general health
- a desire to eat less fat and saturated oils
- purchase of more grilled rather than fried fish.

The response to other suggested trends was less pronounced (Figure 4.7.1).

When asked about other trends in food preferences amongst their customers (Question 12b, Appendix II), 'restaurant' respondents most frequently expressed the view that "nothing" else was emerging (Figure 4.7.2). Some further comments elaborating on aspects of general dietary health and concern over value for money were made.

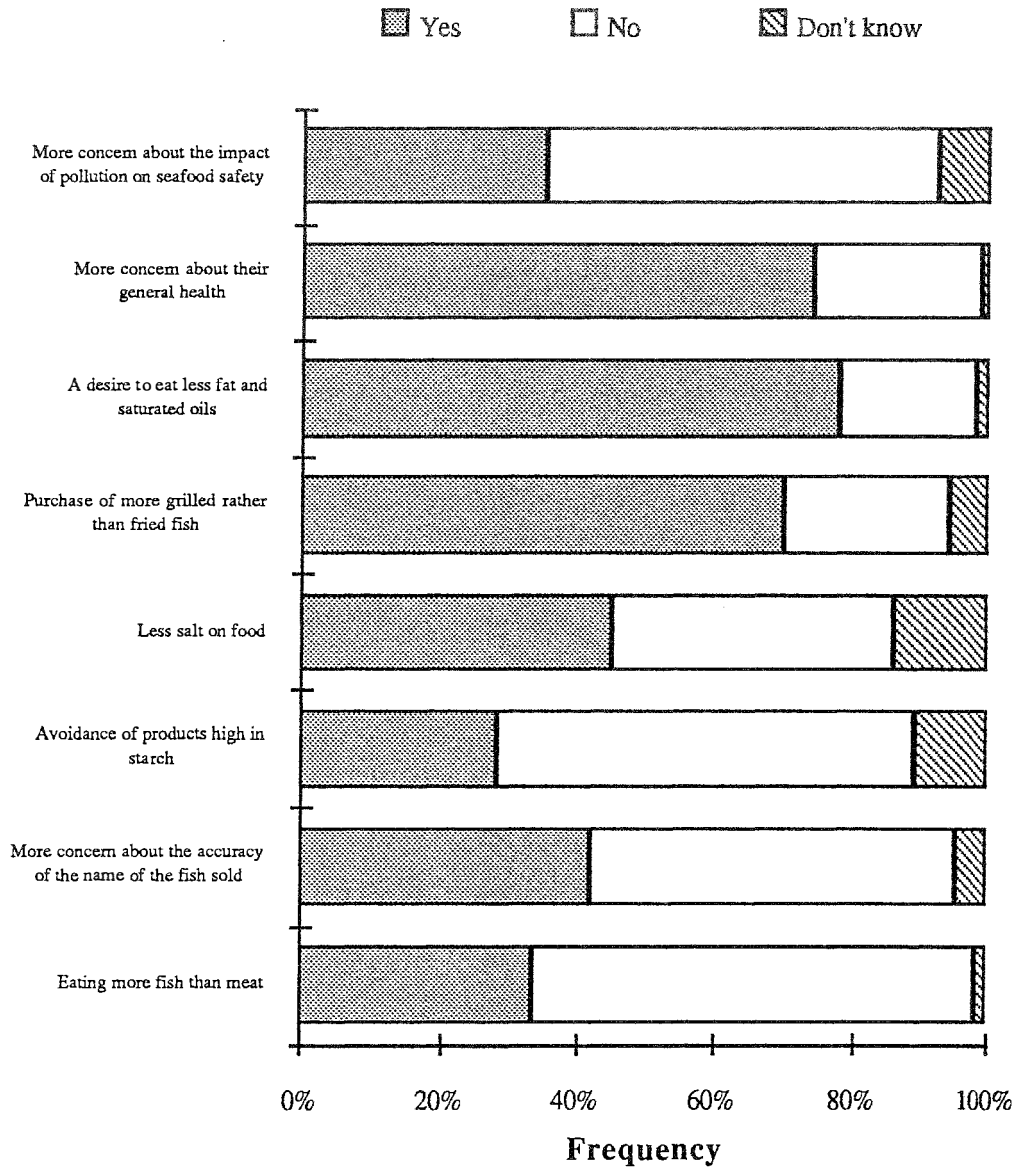
Of a range of eleven wild and farmed species/types of fish and seafood which the fishing industry considers under-utilised (Question 15, Appendix II), 'restaurant' respondents took the opportunity to comment favourably on the potential of seven species/types (Figure 4.7.3). Six of these seven were farmed species. In general, the wild species, apart from squid/calamari were seen to have no potential by most respondents.

The main reasons why 'restaurants' believe in the potential of these under-utilised species provides further insight. In gross terms, the most frequently cited reason reflected "customer preference" (Figure 4.7.4). Other more specific attributes relating directly to the 'restaurant' business were also raised, eg:

- good flavoured fish
- versatile
- always available/constant supply (if farmed).

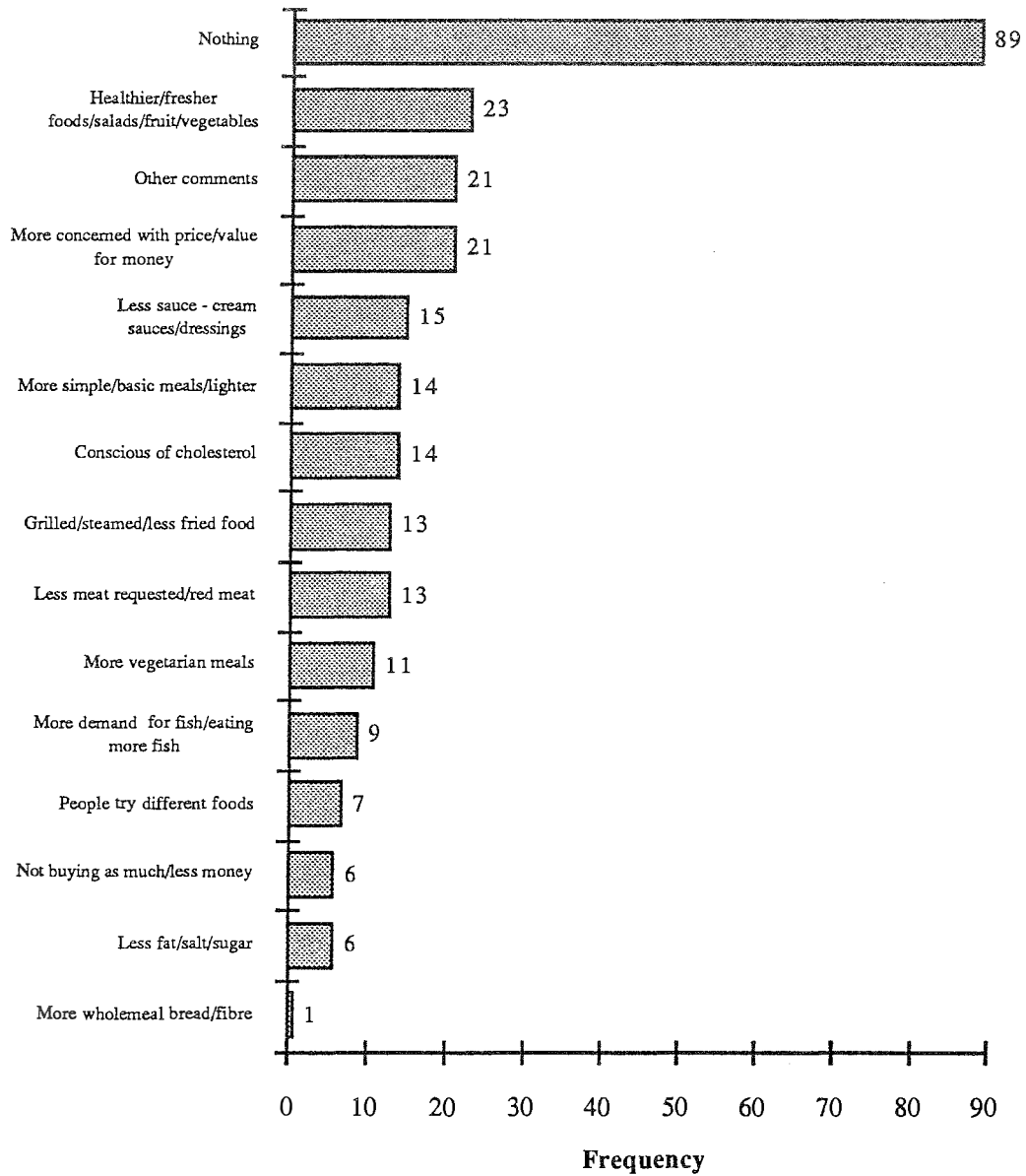
More detailed examination of the data reveals that squid and oysters accounted for 25% and 18% of all responses on "popular fish/in demand" respectively. Rainbow trout was the source of 28% of responses on "good flavoured fish". Squid drew 33% of responses relating to "versatile". Atlantic salmon drew 28% of responses on "reputation (good quality, etc)". Farm barramundi was the source of 36% of responses on "good/equal size portions". Regarding potential for increased usage "if the price came down", 76% of all responses related to farm prawns, Atlantic salmon and farm barramundi.

Figure: 4.7.1: Trends with Customers' Food Preferences Noticed by 'Restaurants' Over the Preceding 12 Months



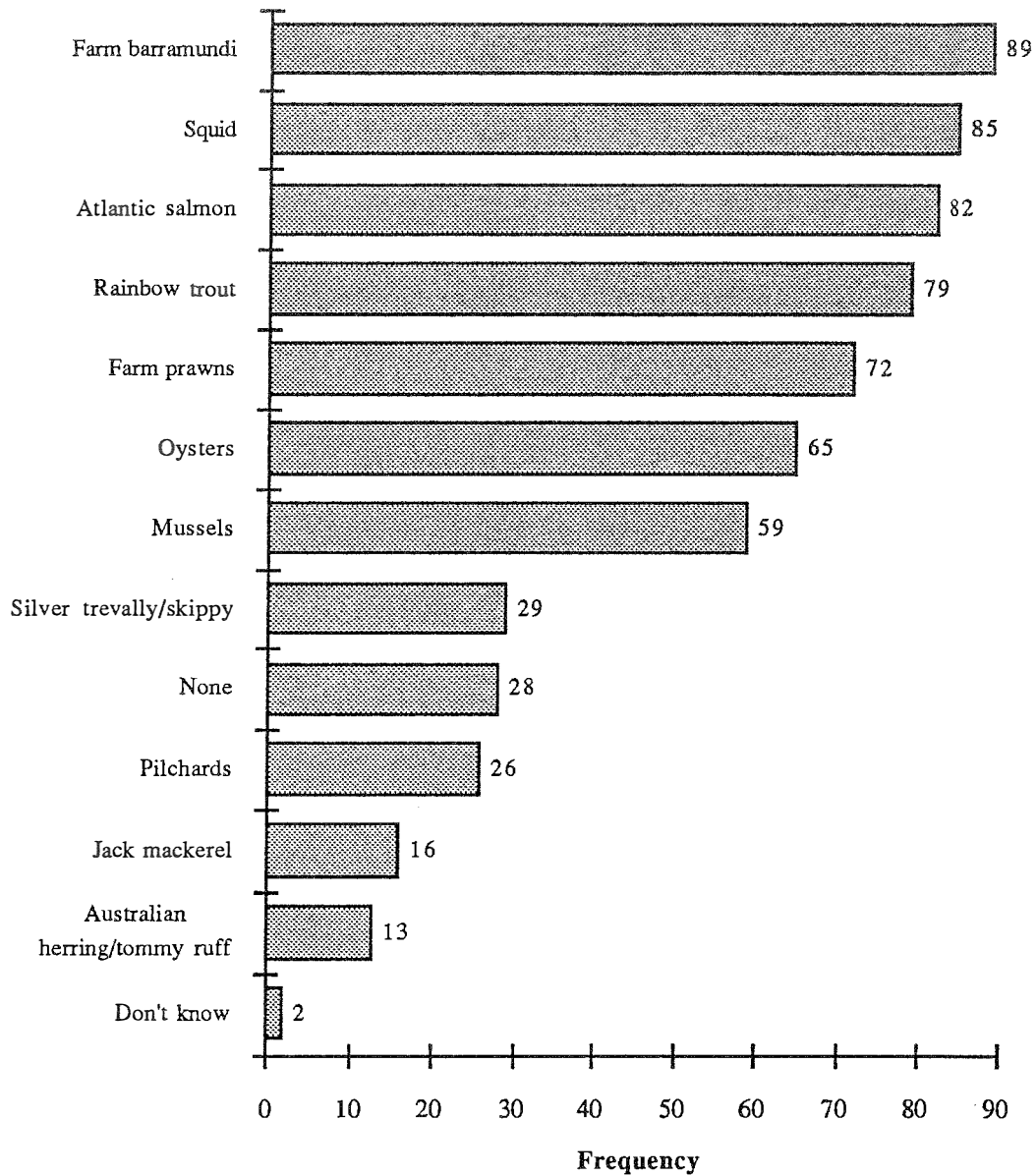
198 respondents offered responses on each of 8 trends for May 1991 and September 1991 surveys (see Question 12a, Appendix II).

Figure: 4.7.2: Other Trends in Food Preferences Noticed in Last 12 Months



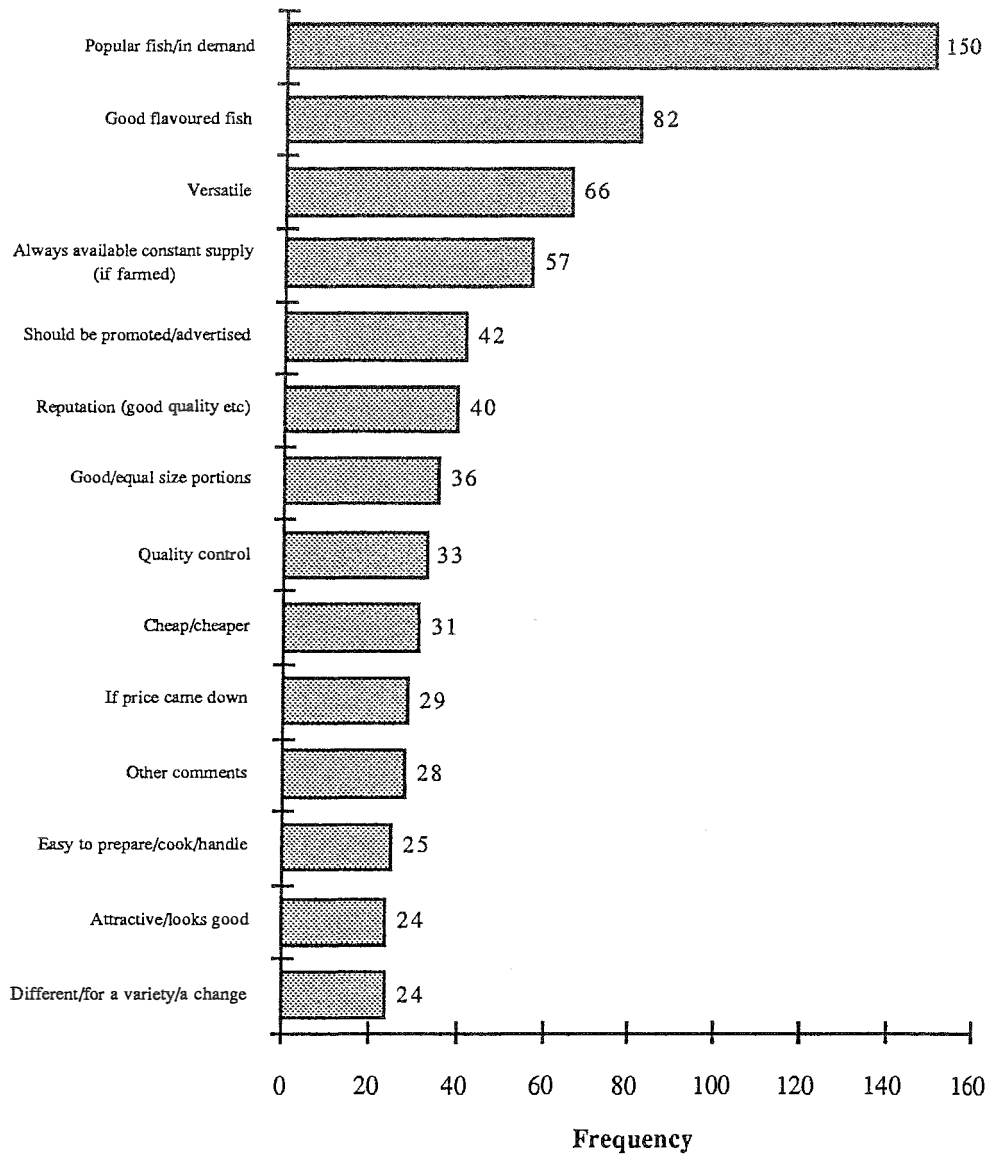
198 respondents offered 263 responses for May 1991 and September 1991 surveys (see Question 12b, Appendix 2).

Figure: 4.7.3: Under-utilised Species with Potential for Increased Usage by 'Restaurants'



202 respondents offered 645 responses for May 1991 and September 1991 surveys (see Question 15a, Appendix II).

Figure 4.7.4: ‘Restaurants’ Main Reasons for Believing in the Potential of Under-utilised Species



202 respondents offered 826 responses on 11 wild or farmed under-utilised species for May 1991 and September 1991 surveys. Only the most frequently cited reasons comprising 80% of all responses are shown (see Question 15b, Appendix II).

4.8 'Restaurant' and Industry Initiatives to sell more Fish

'Restaurant' respondents had earlier suggested substantial confidence in their ability to work with fish and seafood, by indicating "none" as the leading problem in selling fish/seafood; although there was concern over the price of these goods.

When asked what actions needed to be taken for their business to stock and sell more fish and seafood products (Question 13a, Appendix II), respondents were consistent by replying most frequently "none" and "lower/more reasonable prices/specials" (Figure 4.8.1). More advertising and greater customer demand were the next most frequent means whereby 'restaurants' could build their sales of fish and seafood.

Regarding actions which might be taken by the fishing industry in general to aid the sale of fish and seafood through 'restaurants' (Question 13b, Appendix II), respondents focused especially on price levels and their fluctuation. The role which could be played by advertising was again frequently cited (Figure 4.8.2).

A previous phase of Industry Leader Interviews had identified ten possible actions which were held as likely to increase purchases of fish and seafood products (Question 14, Appendix II). 'Restaurant' respondents indicated their views on the likely effectiveness of these actions (Figure 4.8.3). Their ambivalence over the likely impact of actions is reflected in the overall scores for actions; all fall within the range "somewhat likely" to "somewhat unlikely". There is no emphatic feeling either way that these actions will achieve anything.

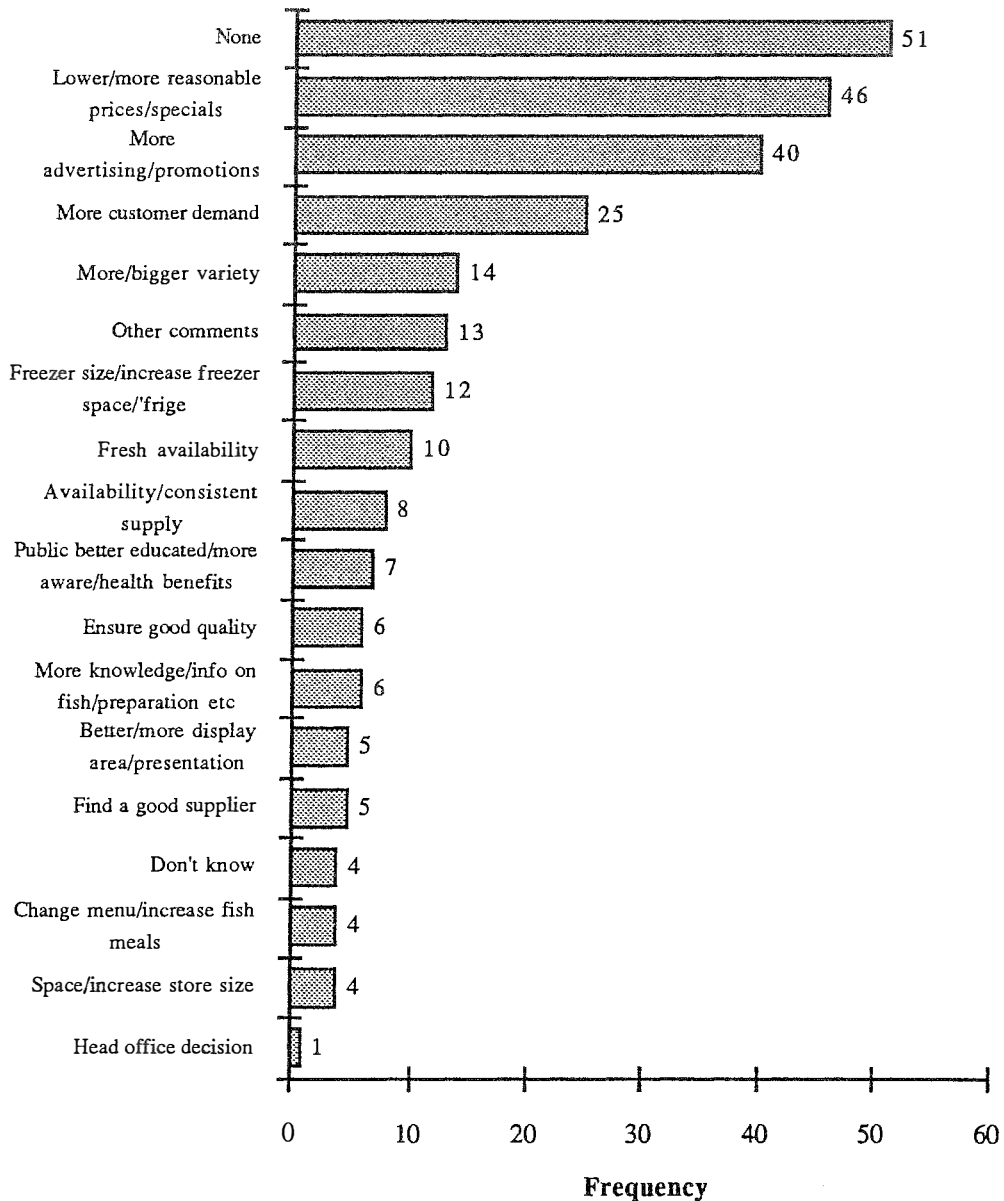
The greatest likelihood of achieving an increase in sales was attributed to "more advertising support", followed by actions to ensure a consistent supply of product.

The 'restaurant' respondents were less optimistic overall about the prospect for increased sales of fish and seafood over the next five years (Question 16a, Appendix II) than were caterers (Figure 4.8.4). The proportion which either didn't know or felt that sales would decrease were double those in the caterer group, at the expense of the proportion which held that sales would increase.

Analysis of the reasons for the expectations which respondents held (Question 16b, Appendix II) show that:

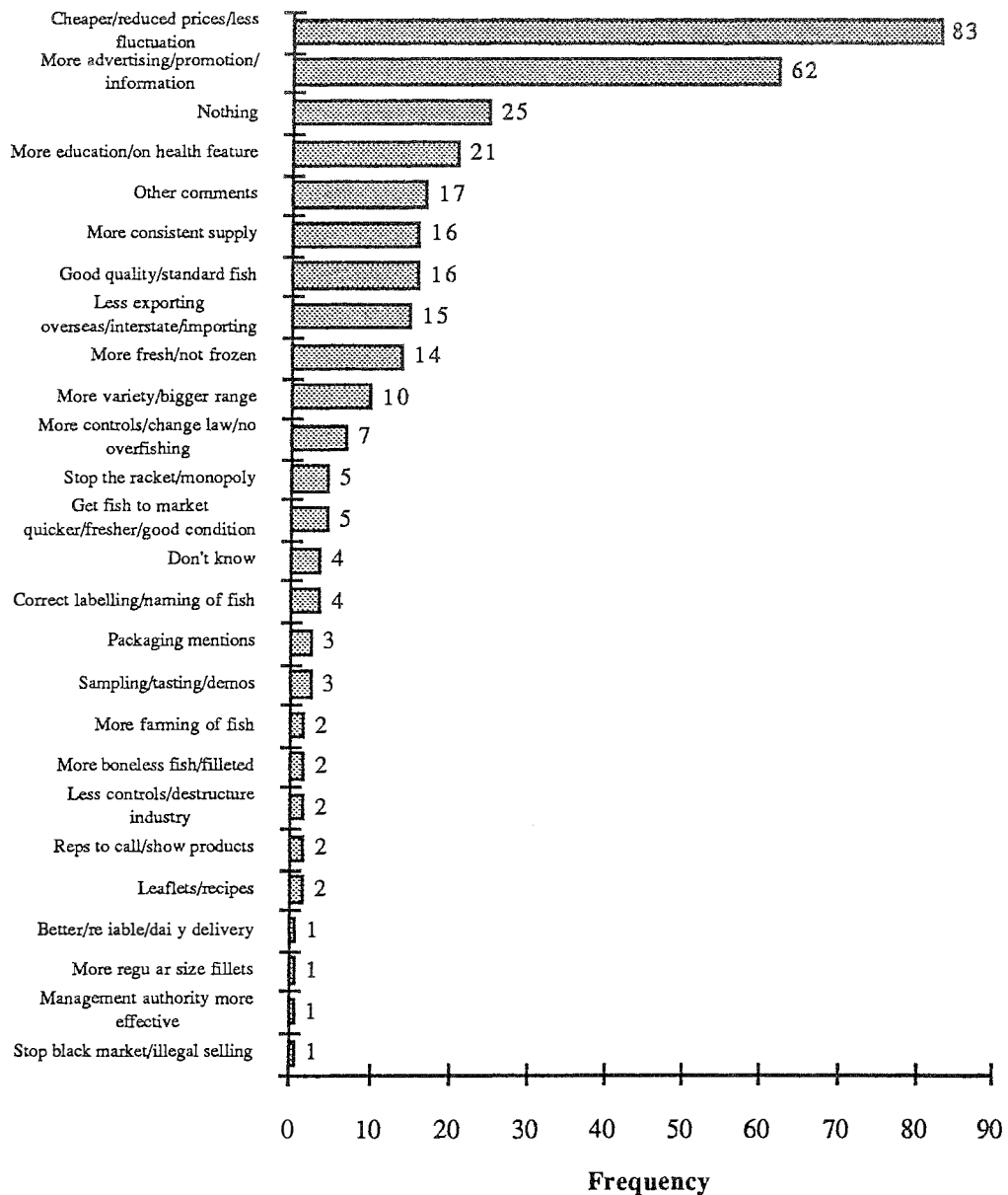
- the most frequently cited reason for an expected sales increase was that "people are becoming more health conscious"
- the most frequently cited reason for no change was that there "has not been a change in (five to ten) years"
- the most frequently cited reason for a decrease in expected sales was that fish and seafood are "becoming too expensive/people can't buy" (Figure 4.8.5).

Figure 4.8.1: Actions Needed for 'Restaurants' to Stock/Sell More Fish



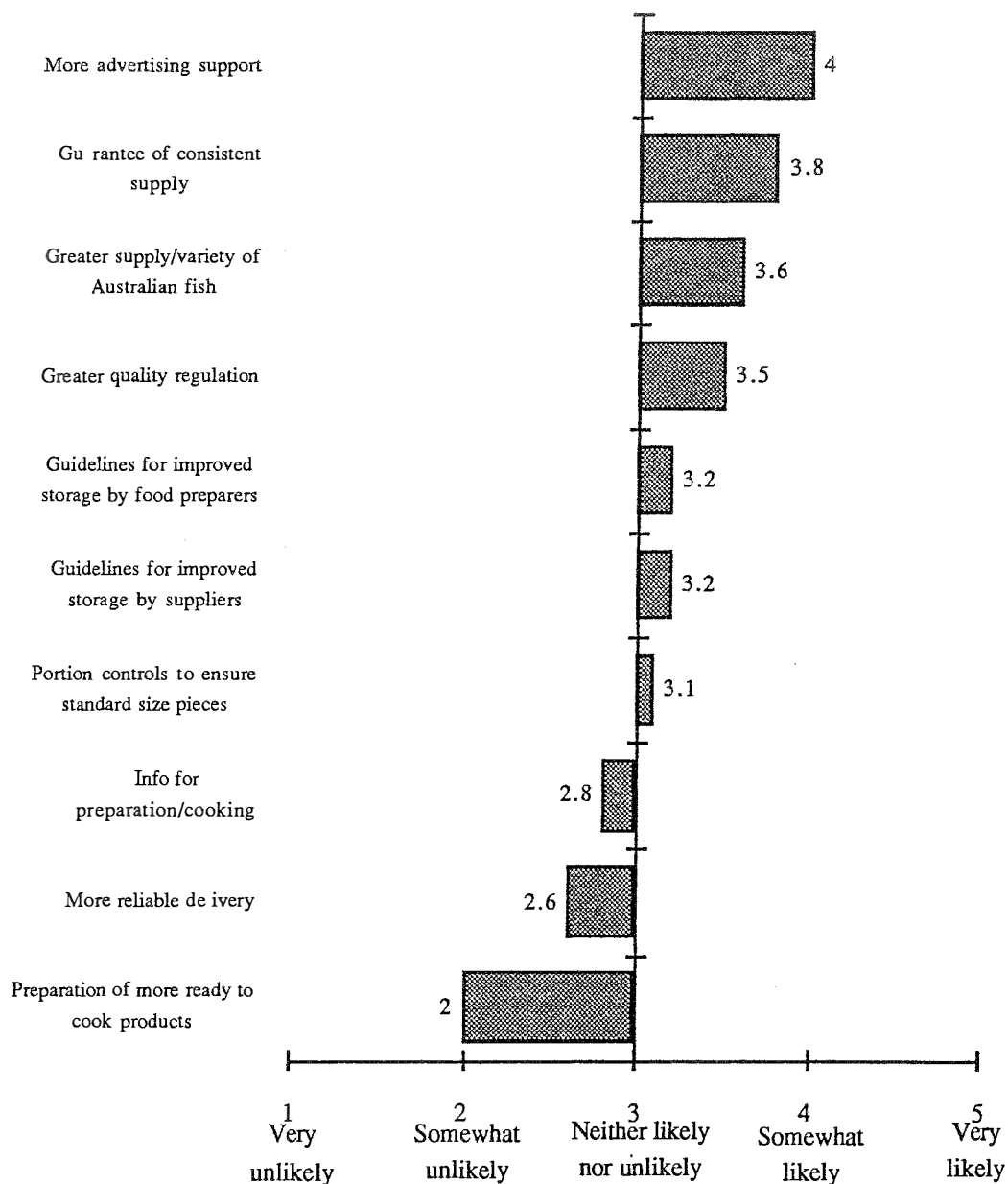
202 respondents offered 261 responses for May 1991 and September 1991 surveys (see Question 13a, Appendix II).

Figure 4.8.2: Actions by Fishing Industry to Increase Sales of Fish and Seafood at 'Restaurants'



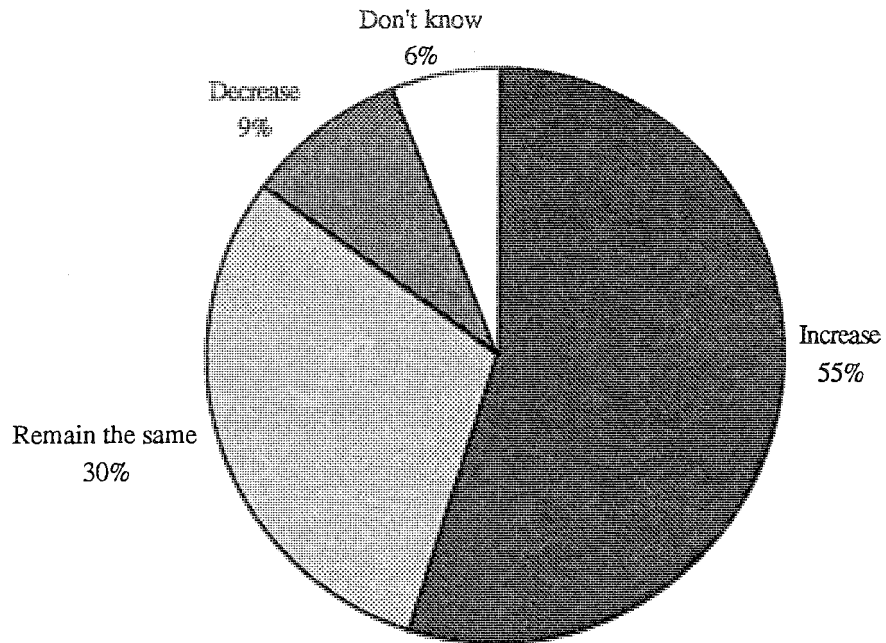
202 respondents offered 324 responses for May 1991 and September 1991 surveys (see Question 13b, Appendix II).

Figure 4.8.3: Likelihood of Actions Leading to Increase in Fish and Seafood Products Purchases by 'Restaurants'



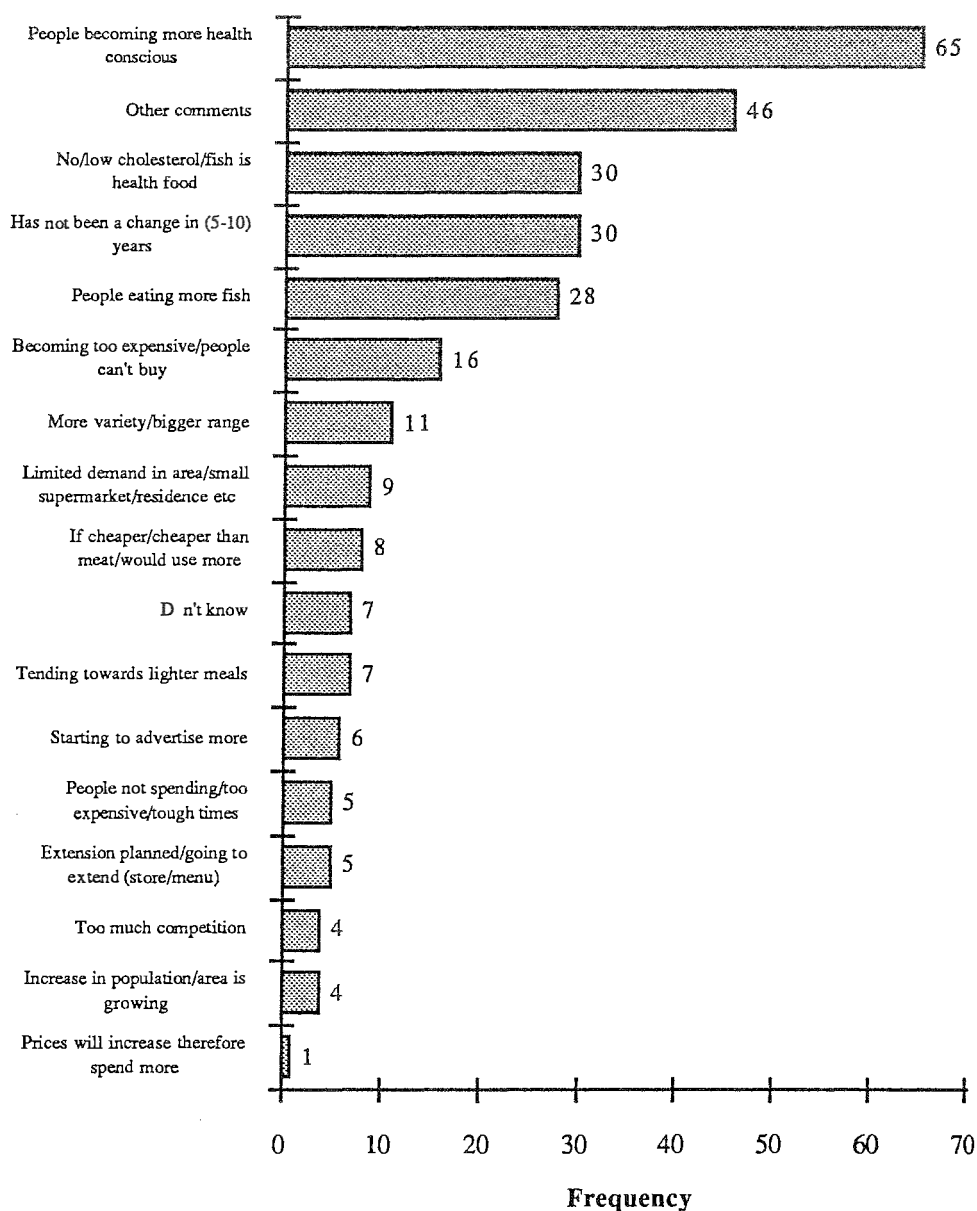
202 respondents offered responses on each of 10 issues across the May 1991 and September 1991 surveys (see Question 14, Appendix II).

Figure 4.8.4: 'Restaurants' Opinion of Sales Prospects for Fish/Seafood Over the Next 5 Years



202 respondents offered 202 responses for May 1991 and September 1991 surveys (see Question 16a, Appendix II).

Figure 4.8.5: 'Restaurants' Reasons for Expected Sale of Fish in Next Five Years



202 respondents offered 282 responses for May 1991 and September 1991 surveys (see Question 16b, Appendix II).

4.9 Business Details - Turnover and Staff

Further details of the 'restaurants' business were sought (Questions 20 - 25, Appendix II) and are summarised in this Section.

The majority of 'restaurants' businesses had a weekly non-liquor turnover under \$5,000, with businesses in the turnover range \$6,000 to \$20,000 also being relatively frequent (Figure 4.9.1). These, plus businesses with higher turnovers raised the average weekly non-liquor turnover to \$11,822.10; however, the reliability of this figure is questionable, given that about 36% of respondents either did not know or refused to answer specific questions on turnover.

Analysis of the percentage of 'restaurants'' average weekly non-liquor sales due to fish and seafood shows that this was most frequently in the range 11% to 20%. Only 15% of respondents received 50% or more of non-liquor turnover from fish and seafood sales (Figure 4.9.2). The computed average figure was 33.7%.

The most frequently cited dollar value range for weekly 'restaurants' sales due to fish and seafood was \$2,001 to \$5,000. This range also bracketed the computed average figure of \$4,150.50. Again, the relatively high proportion of respondents who were unable or unwilling to answer this question (37%) reduces the reliability of this statistic.

'Restaurants' as a group were very reliant on the fresh/frozen form for fish and seafood for preparing their meals; the average of respondents' estimates gave a figure of 92.8% for this form; canned fish and seafood contributed about 3%, with other forms making up the balance.

The frequency distributions on the numbers of full time staff and part time staff employed by 'restaurants' were bi-modal, both types of staff showing peaks at two and six to ten people.

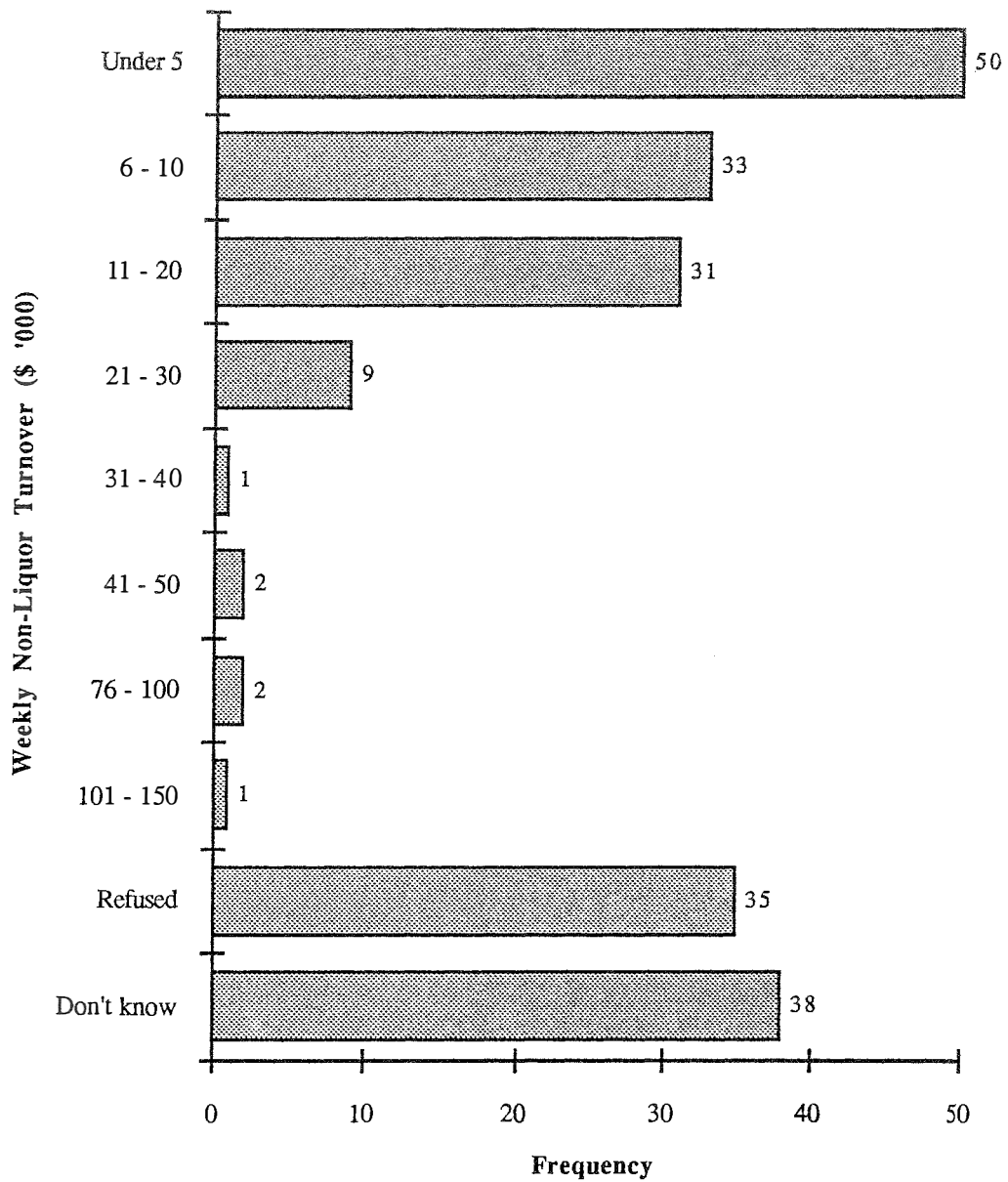
Only one of the 'restaurants' had any ownership ties with:

- fish and seafood wholesaler
- fish and seafood processor
- fish and seafood retailer
- another retailer selling cooked fish or seafood,

while a further two either did not know or gave no answer.

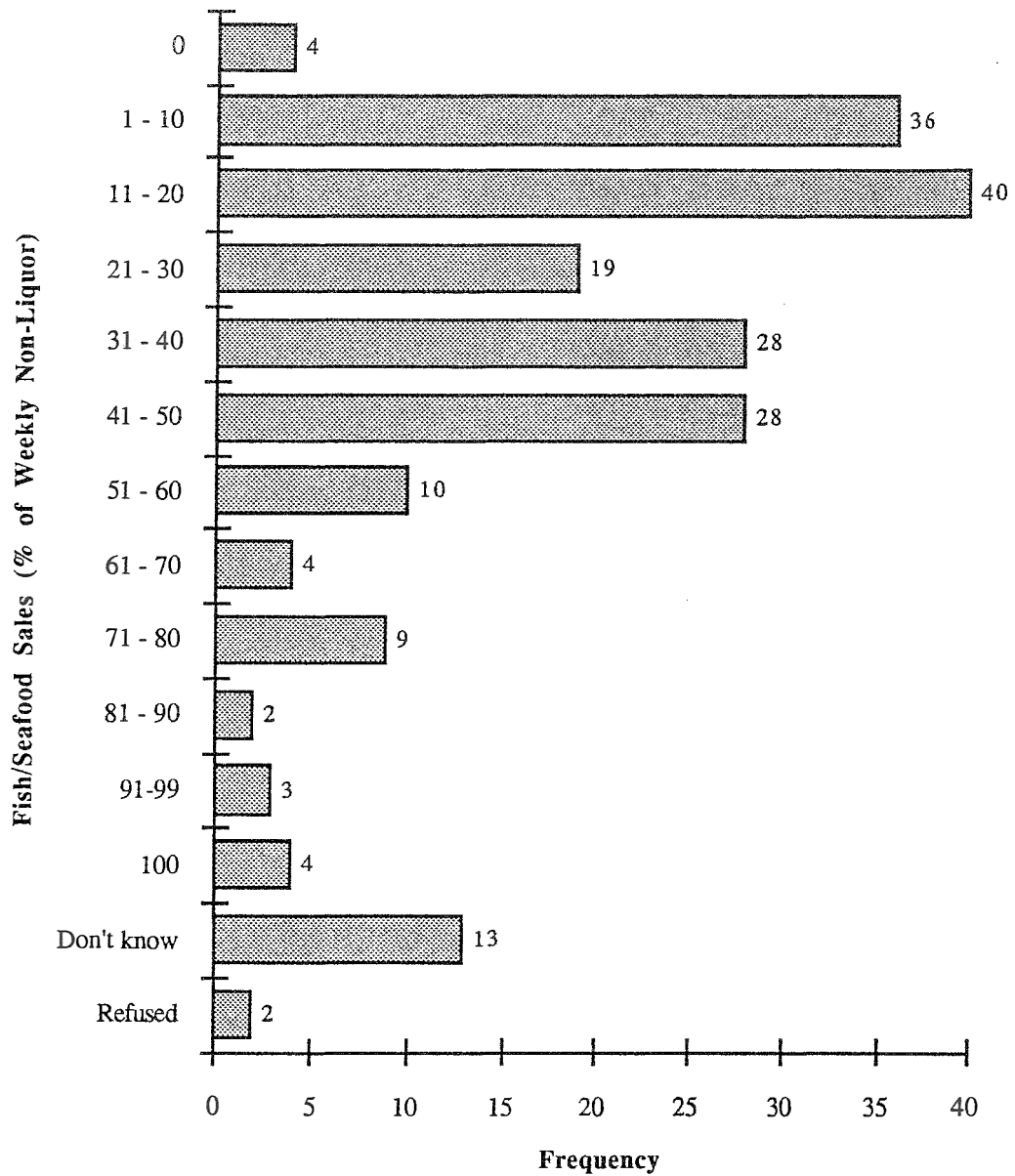
The average seating capacity of the 'restaurants' (excluding sporting and social clubs) was 200, with up to 100 seats being the most frequent category. Of the 31 motels included in the 'restaurants' group, 21 had up to 50 rooms available and overall average was 47 rooms.

Figure 4.9.1: Average Weekly Non-Liquor Turnover of 'Restaurant' Business (\$ '000)



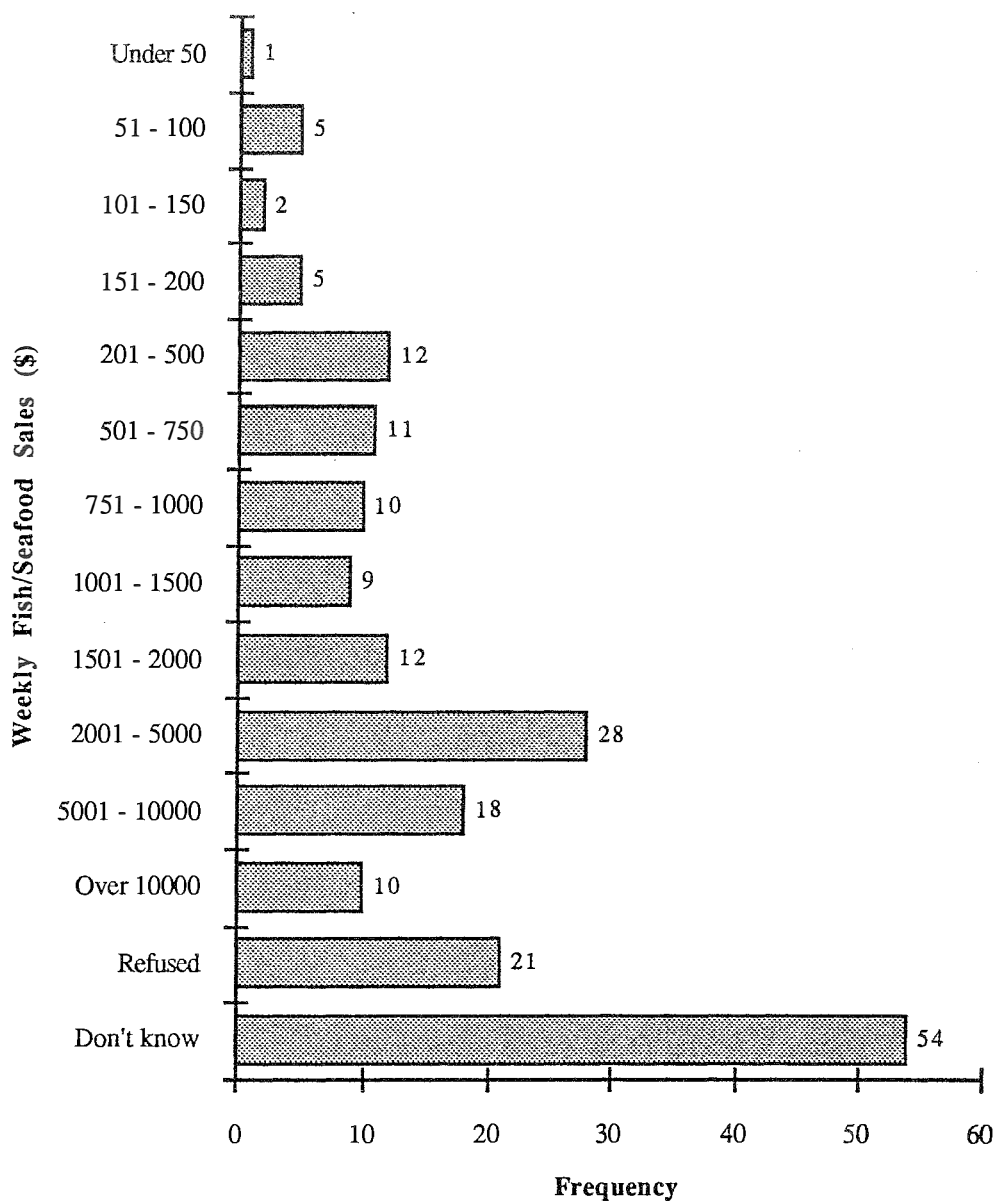
202 respondents offered 202 responses for May 1991 and September 1991 surveys (see Question 20a, Appendix II).

Figure 4.9.2: Percentage of 'Restaurants' Average Weekly Non-Liquor Sales Due to Fish/Seafood



202 respondents offered 202 responses for May 1991 and September 1991 surveys (see Questions 20b, Appendix II).

Figure 4.9.3: Value of 'Restaurants' Weekly Sales due to Fish/Seafood Products



202 respondents offered 202 responses for May 1991 and September 1991 surveys (see Question 20b, Appendix II).

5. Detailed Findings - 'Take-away' Outlets

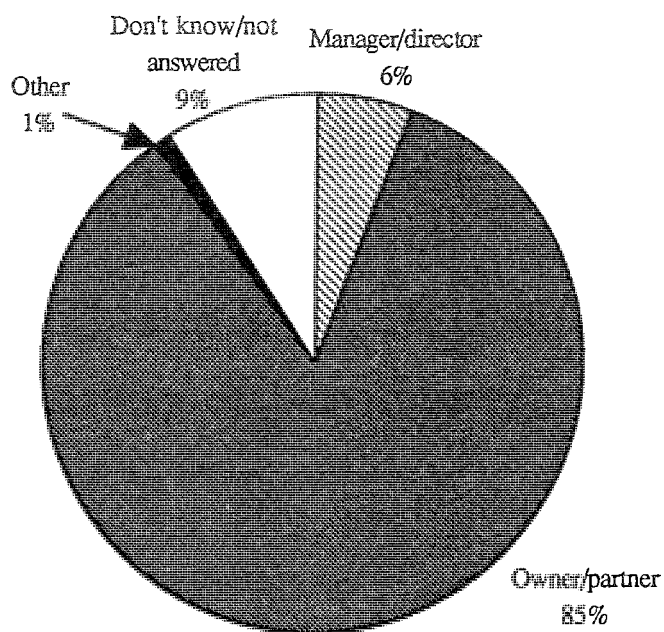
5.1 'Take-away' Outlets - Type, Position of Respondents

A third major route for consumption of fish and seafood out of the home is through 'take-away' outlets. In many instances the 'take-away' meal may be **consumed** in the home but the emphasis here is that the fish and seafood are **prepared** away from home. For this reason, sales from 'take-away' outlets are considered in this report on out-of-home consumption.

Two types of establishments comprised the sample base of 149 respondents, ie fish and chip shops and a group of less defined "other" take-away outlets. The distribution of the 149 respondents between these two types of establishments was 58% fish and chip shops and 41% other take-away outlets. Both components of the sample base were drawn from the cities of Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart on the basis of national business demographics.

The majority of respondents described themselves (Question 1a, Appendix II) as owner/partner of the establishments (85% of responses); a further 6% were managers/directors (Figure 5.1.1). Melbourne respondents were exceptional in that the number responding that they were owner/partners was significantly lower than average (99% confidence limits); furthermore, their frequency of response as "don't know/not answered" was above average (99.9% confidence limits).

Figure 5.1.1 Position of 'Take-away' Respondents



149 respondents offered 149 responses for May 1991 and September 1991 surveys (see Question 1a, Appendix III).

5.2 Type of Business - Initial Data

The majority of 'take-away' outlets were independent in that they had buying responsibilities for one outlet only (96% of 149 respondents). Of the remainder, three bought for two outlets, one bought for three outlets and one bought for four (Question 1b - d, Appendix III).

Responses on whether 'take-aways' formed buying groups (Question 1e, Appendix III) were generally consistent with this; 93% said they did not form part of a buying group, 5% said they were, while a further 2% declined to answer. The fact that all respondents who declined to answer came from Melbourne.

5.3 'Take-aways' Perceptions of Protein Sources

Fish and seafood 'take-away' outlets have a particular focus to their business which generally restricts any consideration that they should offer their customers an alternative protein source (eg meat, pork, poultry).

For this reason, respondents in the 'take-away' group were not asked to complete any questions on their perceptions regarding the relative merits of protein sources which may be available as alternative choices to fish and seafood.

5.4 Fish and Seafood Meals - Problems in Preparation

By far the predominant view was that there were no problems for 'take-aways' in preparing fish and seafood (Question 2, Appendix III; Figure 5.4.1). The number of Melbourne-based outlets who expressed this view was above average (95% confidence level). Aspects of price, time involved in preparation and supply issues were the next most frequently raised problems, comprising 31% of all responses. Comments about freshness of fish and seafood and its inconsistent quality were frequent, an above average proportion of these coming from Sydney based outlets (95% and 99% confidence limits, respectively).

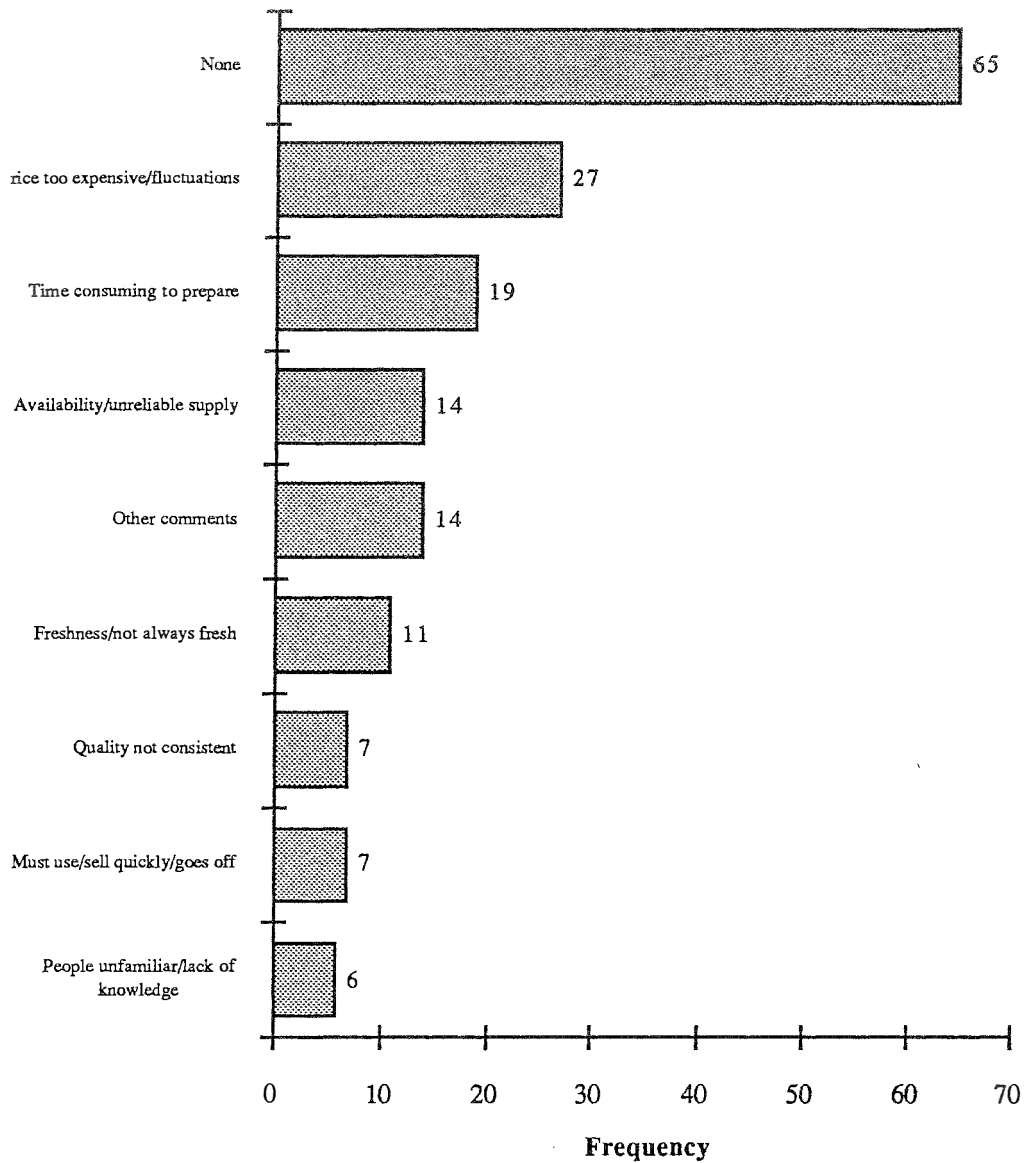
The relative concern about the price levels and price fluctuations for fish and seafood was reinforced when 'take-away' respondents commented on the extent to which a number of previously identified problems influenced their business (Question 3, Appendix III; Figure 4.5 2). Key significance was attached to the following five issues:

- seafood is too expensive to buy
- the low margins necessary to remain competitive
- fish is too expensive to buy
- clients dislike fish because of bones
- difficulty getting continuous supply at steady prices.

Price is a factor in all except the fourth, and the fifth also relates to supply issues raised earlier.

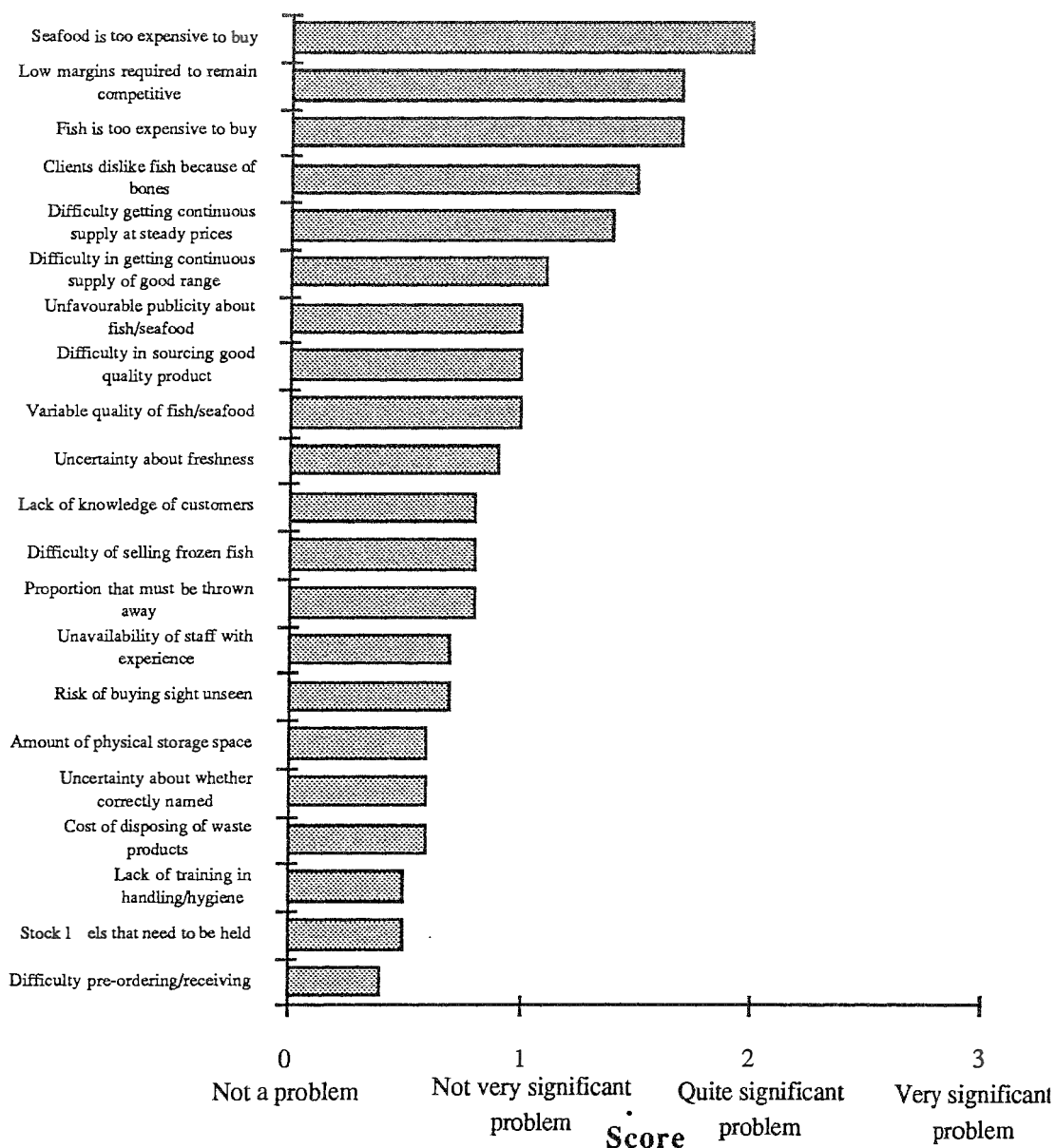
It is worth noting, however, that the degree of problem attached to the top seven problem issues scored only in the range “quite significant problem” to “not very significant problem”. This perception of “degree of problem” ties in well with earlier responses that there were no problems in preparing and selling fish and seafood (33% of all responses, Figure 5.4.1).

Figure 5.4.1: 'Take-aways' Problems in Preparing/Selling Fish/Seafood



149 respondents offered 197 responses for May 1991 and September 1991 surveys. Only the top 80% most frequently cited responses are shown. A further 12 'problems' were cited less frequently (see Question 2, Appendix III)

Figure 5.4.2: Degree of Problem in Selling Fish/Seafood in 'Take-away' Outlets



149 respondents offered responses on each of 21 'problems' cited for May 1991 and September 1991 surveys (see Question 3, Appendix III).

5.5 Fish and Seafood Sales - Types, Formats, Volumes, Origins

'Take-away' respondents were asked about the main types of fish and seafood which they sold, focusing on fresh and frozen product, not canned or bottled (Question 4a, Appendix III).

The eight types of fish most frequently sold by the two broad categories of 'take-away' outlets are shown in Table 5.5.1a. These leading fish species/types accounted for 56% of all responses across 53 species/types.

Shark and whiting were clearly the fish most frequently sold by 'take-aways'.

As regards the form in which fish was bought in by 'take-aways', most were bought as fillets (Table 5.5.1b). Snapper and flathead were the exception as far as the leading types were concerned. A majority of respondents (a bare majority in the case of snapper) bought these species as whole fish. Finfish sold by 'take-away' outlets was predominantly of Australian origin, although hake and cod were largely imported.

There were significant regional differences in terms of the fish species/types sold by 'take-away' outlets (Table 5.5.2). The frequency of sales of hake, bream and flathead (both unspecified species) in Sydney, and shark and whiting (unspecified) in Melbourne were above average. Conversely, the frequency of sales of shark, and whiting in Sydney and hake in Melbourne were lower than average. The relatively small sample sizes in Adelaide, Perth and Hobart counted against uncovering statistically significant differences in sales patterns for these locations.

The eight types of seafood most frequently sold by 'take-away' outlets are shown in Table 5.5.3. The frequency of sales for prawns, seafood sticks, scallops and calamari dwarf most other seafood items. As has been found before, sales of seafood tend to be concentrated in a relatively few species/types; in the case of 'take-away' outlets, the leading eight types in Table 5.5.3 accounted for 78% of all responses relating to a range of 30 species/types.

Table 5.5.1a: Eight Main Types of Finfish Sold by Fish and Chip Shops and Other Take-away Outlets in the Month Preceding Survey

Fish and Chip Shops			Other Take-Away Outlets		
Rank	Type of Finfish	Number of Respondents ⁽¹⁾ Selling	Rank	Type of Finfish	Number of Respondents ⁽¹⁾ Selling
1	Shark	42	1	Hake	26
2	Whiting (unspecified) ⁽²⁾	42	2	Shark	19
3	Orange roughy ⁽³⁾	36	3	Whiting (unspecified) ⁽²⁾	18
4	Bream (unspecified)	25	4	Orange roughy ⁽³⁾	7
5	Flathead	23	5	Snapper	7
6	Snapper	23	6	Cod (unspecified)	7
7	Hake	20	7	Bream (unspecified)	6
8	Flounder	15	8	Flounder	5

Table 5.5.1b: Preferred Form Purchased by the Outlet and Presumed Origin

Combined Data Type of Finfish	Preferred Form Bought ⁽⁴⁾ (Frequency ⁽¹⁾)	Origin - weighted average estimate (% local/ Australian)
Shark	Fillet (39/66)	89.6%
Whiting (unspecified)	Fillet (49/62)	74.1%
Hake	Fillet (42/46)	19.0%
Orange roughy	Fillet (26/45)	82.6%
Bream (unspecified)	Fillet (22/33)	74.2%
Snapper	Whole (16/29)	65.6%
Flathead (unspecified)	Whole (19/30)	100%
Flounder (unspecified)	Fillet (10/21)	100%
Cod (unspecified)	Fillet (14/19)	20%

⁽¹⁾149 respondents offered 569 responses on 53 species/types of finfish for May 1991 and September 1991 surveys (see Questions 4, 5 and 7, Appendix III)

⁽²⁾ Respondents provided no further details on whiting species

⁽³⁾ Orange roughy may be understated, since this species is commonly known as sea perch in NSW. Such responses would be recorded with perch (unspecified). This latter category received 16 responses (12 from fish and chip shops, 4 from 'other' take-aways; all from Sydney)

⁽⁴⁾ Alternative forms considered were: live, whole, fillet, cutlet, headed/gutted, smoked, other.

Table 5.5.2: Leading Finfish Species/Types Sold by 'Take-away' Outlets, According to Location

Leading Finfish Species/Types	Frequency of Responses, by City					
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Shark	4 (---)	37 (+++)	3	5	5	8
Whiting (unspecified)	4 (---)	28 (+++)	13	13	3	0
Hake	29 (+++)	2 (---)	3	7	5	0
Orange roughy	9 (-)	15	16	2	0	1
Bream (unspecified)	21 (+++)	8	2	0	0	0
Snapper	11	10	1	2	6	0
Flathead	21 (+++)	3	1	1	0	1
Flounder	1 (--)	11 (++)	0	3	0	6

(+++), (++) , (+) denotes frequencies of responses for a species/type which are significantly greater than would be expected for that location (at 99.9%, 99% and 95% confidence limits, respectively)

(---), (--), (-) denotes frequencies of response for a species/type which are significantly lower than would be expected for that location (at 99.9%, 99% and 95% confidence limits respectively)

An absence of (+), (-), etc, means that values are not significantly different from the statistically expected distribution in that row.

Table 5.5.3a: Eight Main Types of Seafood Sold by Fish and Chip Shops and Other Take-away Outlets in the Month Preceding Survey

Fish and Chip Shops			Other Take-Away Outlets		
Rank	Type of Seafood	Number of Respondents Selling ⁽¹⁾	Rank	Type of Seafood	Number of Respondents ⁽¹⁾ Selling
1	Prawns	70	1	Seafood sticks	31
2	Scallops	39	2	Squid/calamari	20
3	Squid/calamari	39	3	Prawns	18
4	Seafood sticks	24	4	Scallops	13
5	Oysters	23	5	None	12
6	Mussels (unspecified)	11	6	Seafood bites	6
7	Crab (unspecified)	10	7	Prawn cutlets, crumbed, imported	5
8	Crayfish (unspecified)	6	8	Seafood extender	3

Table 5.5.3b: Preferred Form Purchased by the Outlet and Presumed Origin

Combined Data Type of Seafood	Preferred Form Bought ⁽²⁾ (Frequency ⁽¹⁾)	Origin - weighted average estimate (% local/ Australian)
Prawns	Whole (52/104)	77.6%
Seafood sticks	Other (44/52)	44.3%
Squid/calamari	Other (42/58)	37.4%
Scallops (unspecified)	Whole, other (each 22/50)	55%
Oysters	Whole (15/23)	100%
Mussels (unspecified)	Whole (7/12)	45.8%
Seafood bites	Other (10/11)	55.6%
Crab (unspecified)	Whole (9/11)	100%

(1) 149 respondents offered 381 responses on 30 species/types of seafood for May 1991 and September 1991 surveys (see Questions 4b, 5 and 7, Appendix III)

(2) Alternative forms considered were: live, whole, fillet, cutlet, headed/gutted, smoked, other.

Table 5.5.4: Leading Seafood Species/Types Sold by ‘Take-away’ Outlets, According to Location

Leading Seafood Species/Types	Frequency of Responses, by City					
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart
Prawns	32	15 (-)	16	12	7	2
Squid/calamari	21	14	8	8	6	2
Seafood sticks	13 (-)	19	5	9	1	8
Scallops	13	23 (+++)	3	7	4	3
Oysters	15 (++)	5	3	1	0	0
None	3	6	3	0	3	0
Mussels (unspecified)	7	1	2	0	2	0
Seafood bites	1	0 (-)	4	0	0	6

(+++), (++) , (+) denotes frequencies of responses for a species/type which are significantly greater than would be expected for that location (at 99.9%, 99% and 95% confidence limits, respectively)

(---), (--), (-) denotes frequencies of response for a species/type which are significantly lower than would be expected for that location (at 99.9%, 99% and 95% confidence limits respectively)

An absence of (+), (-), etc means that values are not significantly different from the statistically expected distribution across that row.

The situation with forms of seafood bought was as varied with ‘take-away’ outlets as for previous out-of-home outlets (caterers and restaurants). Prawns were primarily bought whole, whereas scallop purchases were evenly divided between ‘whole’ and ‘other’ formats.

Imports played a more obvious role in the leading seafood types at 'take-away' outlets, with three of the leading eight types averaging more than 50% imported produce.

Regional preferences were also apparent in the purchases of seafood items. Purchases of scallops in Melbourne were above average, as were oysters in Sydney. Purchases of prawns in Melbourne and seafood sticks in Sydney were below average.

Data on the actual volumes (kg) of fish and seafood species/types purchased by 'take-away' outlets are presented in two ways, as in previous sections. First, the number of 'take-away' outlets making purchases within specific weight ranges is presented in unaggregated form, so as to illustrate any differences in buying pattern between May 1991 and September 1991 surveys (Figures 5.5.1 and 5.5.2). Finfish was bought in a very broad band of weight ranges especially between the extremes of 1kg to 5kg per month and 150kg to 200kg per month (Figure 5.5.1). Some rather large differences between the frequency of finfish purchases for the earlier and later survey occur at the lower weight ranges and for the 151kg to 200kg range.

In contrast to the weight range purchase pattern for finfish, the numbers of purchases relating to seafood declined dramatically beyond the lower weight ranges (1kg to 5kg, 6kg to 10kg; Figure 5.5.2). Some minor differences between the frequency of seafood purchases for the May 1991 and September 1991 surveys occur at the bottom and mid range.

Data which have been aggregated across the two survey periods, on the number of purchases of fish and seafood items in different weight range lots are shown in Figures 5.5.3 and 5.5.4. Information on the number of species/types purchased is also included. The broad spread of weight ranges over which fish are purchased (Figure 5.5.3) contrasts with the more focused purchase patterns for seafood (Figure 5.5.4).

The second method of presenting data and volumes of fish and seafood is by individual species. Data on the volume of 28 species/types of finfish purchased in the month prior to the May 1991 and September 1991 surveys are presented in Table 5.5.5. The extended databank list of 52 species/types was reduced by including only those species for which the total volume purchased in the month prior to either survey exceeded an arbitrary value of 200kg. It is noteworthy that while respondents indicated that shark and whiting were purchased in about the same frequency (Table 5.5.1), the quantities of shark purchased were at least four times that of whiting. Volumes of hake, orange roughy, bream (unspecified), snapper and flathead purchased were also greater than for whiting. Data on flounder were similar to the situation with whiting in that it was cited as a frequent sale, yet its purchased volumes were much lower than many other species/types purchased.

As a generalisation, the popular species are those purchased in quantities over one tonne by the sample group during the month prior to survey.

Table 5.5.5: Leading Finfish Types Purchased by
'Take-away' Outlets in the Month Prior to Survey⁽¹⁾

Species/Type of Finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Blue eye	382	95.5	693	173.3
Bream (sea)	1,700	188.9	95	15.8
Bream (unspecified)	1,630	116.4	1,568	82.5
Butterfish	976	244	145	48.3
Cod (unspecified)	2,110	263.8	1,450	131.8
Dory, John	190	47.5	820	136.7
Dory, mirror	0	0	780	390.0
Flathead	1,395	139.5	2,858	142.9
Flounder	400	23.5	55	13.8
Garfish	194	32.3	208	23.1
Gemfish	125	62.5	268	67.0
Grenadier blue	527	58.6	1,084	180.7
Hake	3,465	157.5	6,643	276.8
Jewfish	232	116.0	0	0
Kingclip	10	10.0	978	163.0
Leatherjacket	150	48.3	208	41.6
Mullet (unspecified)	845	93.9	180	22.5
Orange roughy ⁽²⁾	2,339	111.4	6,583	274.3
Perch ocean/coral	1,100	366.7	30	30.0
Perch, Nile	0	0	100	100

Continued

Table 5.5.5 continued

Species/Type of Finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Perch (unspecified) ⁽²⁾	1,860	310.0	1,775	136.5
Salmon, Atlantic	150	75.0	330	110.0
Snapper	1,423	109.5	1,324	77.9
Shark	4,487	128.2	4,266	137.6
Trevally ⁽³⁾	480	68.6	3,555	395
Trout, coral	190	63.3	240	80.0
Tuna (unspecified)	0	0	200	200.0
Whiting (unspecified) ⁽⁴⁾	678	24.2	966	28.4

(1) An arbitrary cut off point of over 200kg total volume purchased in either survey was applied for inclusion in the Table.

(2) Orange roughy volumes may be understated, since this species is also commonly known as sea perch in NSW. Such responses would be recorded amongst perch (unspecified). All references to perch (unspecified) came from Sydney respondents

(3) Trevally includes 2 responses on blue/silver warehou in September 1991 survey (3,040kg purchased). There were no specific references in either survey to purchases of silver trevally (skippy)

(4) There were single specific references in the May 1991 survey to purchases of 30kg and 80kg of sand whiting and trumpeter whiting, respectively.

Table 5.5.6: Leading Seafood Types Purchased by 'Take-aways' in the Month Prior to Survey⁽¹⁾

Species/Type of Seafood	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Crab (unspecified)	591	98.5	85	17
Mussels (unspecified)	28	9.3	231	25.7
Oysters	130	11.8	100	8.3
Prawns	3,722	77.5	6,551	116.9
Scallops	249	11.3	532	19
Seafood sticks	244	8.7	146	6.1
Squid tubes	0	0	860	172
Squid/calamari	1,015	29.9	657	27.4

(1) An arbitrary cut off point of over 100kg total volume purchased in either survey was applied for inclusion in the Table.

Data on the volumes of 8 species/types of seafood purchased in the month prior to the two survey periods are presented in Table 5.5.6. The full databank listing of 35 species/types was reduced by including only those for which the total volumes purchased over that interval exceeded an arbitrary value of 100kg. Sales of prawns exceeded any other seafood by a substantial margin. Oysters, though popular (judged by number of purchases made) were purchased in relatively small quantities.

The database for the National Consumption Study highlights further significant regional differences, and also points to numerous examples where particular species are sold more through fish and chip shops rather than 'other' take-away outlets (and *vice versa*). Several examples of this differentiation by outlet are given for fish and seafood in Table 5.5.7.

Table 5.5.7: Significant Differences in the 'Take-away' Outlet Sales of Selected Fish and Seafood Species/Types

Fish/seafood species or type	Frequency of Responses	Outlet Type	
		Fish & Chip Shop	Other Take-away
Blue eye	7	7 (+)	0 (-)
Bream (unspecified)	31	25 (++)	6 (--)
Dory, John	10	9 (+)	1 (-)
Flathead	27	23 (++)	4 (--)
Hake	46	20 (-)	26 (++)
Kingclip	7	7 (+)	0 (-)
Orange roughy	43	36 (+++)	7 (---)
Snapper	29	22 (+)	7 (-)
Trevally (unspecified) ⁽¹⁾	14	12 (+)	2 (-)
Whiting (unspecified)	61	43 (+)	18 (-)
None (seafood)	15	3 (--)	12 (++)
Crab (unspecified)	10	10 (++)	0 (--)
Crayfish (unspecified)	6	6 (+)	0 (-)
Mussels (unspecified)	12	11 (+)	1 (-)
Oysters	24	23 (+++)	1 (---)
Prawns	84	67 (+++)	17 (---)
Prawn cutlets, crumbed, imported	5	0 (--)	5 (++)
Scallops	53	40 (++)	13 (--)
Seafood sticks	55	24 (--)	31 (++)

(+++), (++) , (+) denotes frequencies of responses for a species/type which are significantly greater than would be expected for that location (at 99.9%, 99% and 95% confidence limits, respectively) (---), (--), (-) denotes frequencies of response for a species/type which are significantly lower than would be expected for that location (at 99.9%, 99% and 95% confidence limits respectively) Absence of (+), (-), etc means that values are not significantly different from the statistically expected distribution across outlet types

(1) Does not include 2 responses on blue/silver warehou, both for fish and chip shops.

Fish and chip shops sell bream, flathead, orange roughy, trevally, whiting, oysters, prawns and scallops at above average numbers by comparison with other take-away outlets. While other take-away outlets seem to shun these same species, they do sell hake, seafood sticks and prawn cutlets more frequently than do fish and chip shops.

As an indication of 'take-away' outlets' preference for a particular fish and seafood supply route, 'take-away' outlets were asked to specify the type of supplier used to supply each species/type of fish and seafood bought. The popularity of a particular type of supplier (commercial fisherman/aquaculture farmer, general wholesaler, fish/seafood wholesaler/co-operative, wholesale fish market, or retailer) was then gauged by summing the number of times a particular type of supplier was referred to. (This is referred to as "frequency of use", and is analogous to adding all the separate items on everybody's shopping lists who shop at a particular type of store.)

An indication of the *range* of fish and seafood business done by a particular type of supplier was gained by summing the number of distinct species handled by a supplier type, irrespective of the number of purchasers of that species/type.

The principal type of supplier of both fish and seafood items to 'take-away' outlets is the general wholesaler and wholesale fish market. Together they account for 78% of total sales to 'take-away' outlets (Table 5.5.8).

Table 5.5.8: Type of Supplier of Fish and Seafood to ‘Take-aways’

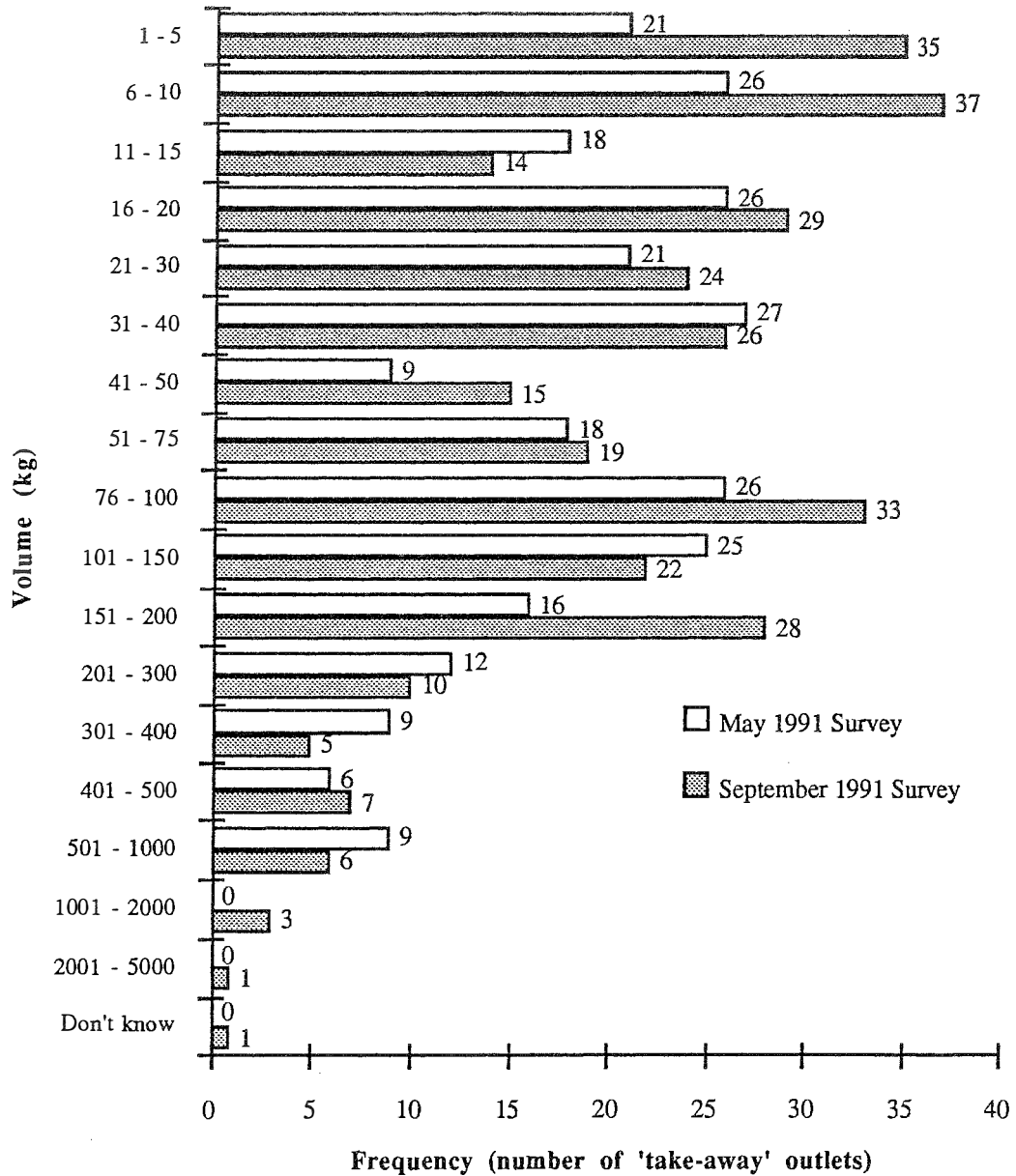
	Frequency of use for:	
	Fresh or Frozen Fish ⁽¹⁾ (Number of Species)	Seafood ⁽¹⁾ (Number of Species)
Commercial fisherman/ aquaculture farm	1.5% (7)	2.6% (4)
General wholesaler	41.4% (36)	49.3% (28)
Fish/seafood wholesaler/ co-operative	14.1% (23)	16.9% (16)
Wholesale fish market	36.8% (44)	21.9% (18)
Retailer	1.7% (8)	3.7% (7)
Other	0.7% (4)	1.1% (4)
Don't know	1.2% (6)	1.1% (3)
No answer	2.5% (12)	3.4% (10)
Totals	100%	100%

(1) respondents offered 589 and 379 responses on fish and seafood respectively across the May 1991 and September 1991 surveys (see Question 6b, Appendix III).

While the general wholesaler is the preferred supplier of finfish to ‘take-away’ outlets, the data show that the **number** of species/types purchased through wholesale fish markets is greater. Similarly, while the frequency of use of commercial fishermen and aquaculture farmers may be low, this category did supply a reasonable number (7) of fish species/types to ‘take-away’ outlets.

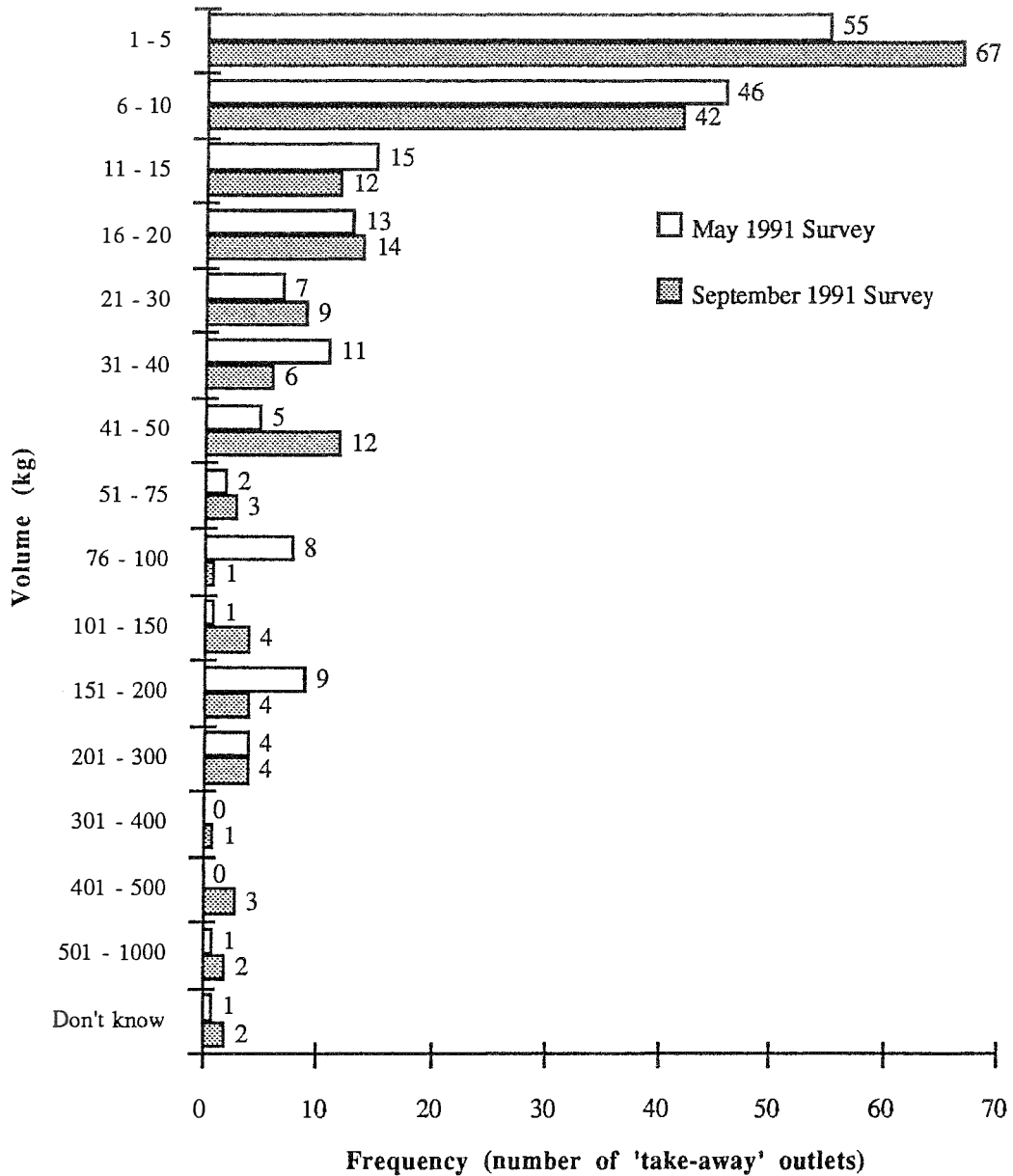
As a check on the data supplied, respondents were asked to estimate what proportion of the total amount spent by the outlet on fish and seafood was accounted for by the species/types discussed (Question 8a, Appendix III). On average, respondents estimated this proportion to be 85.4%.

Figure 5.5.1: Number of 'Take-away' Outlets Which Bought Particular Species/Types of Finfish in Different Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys



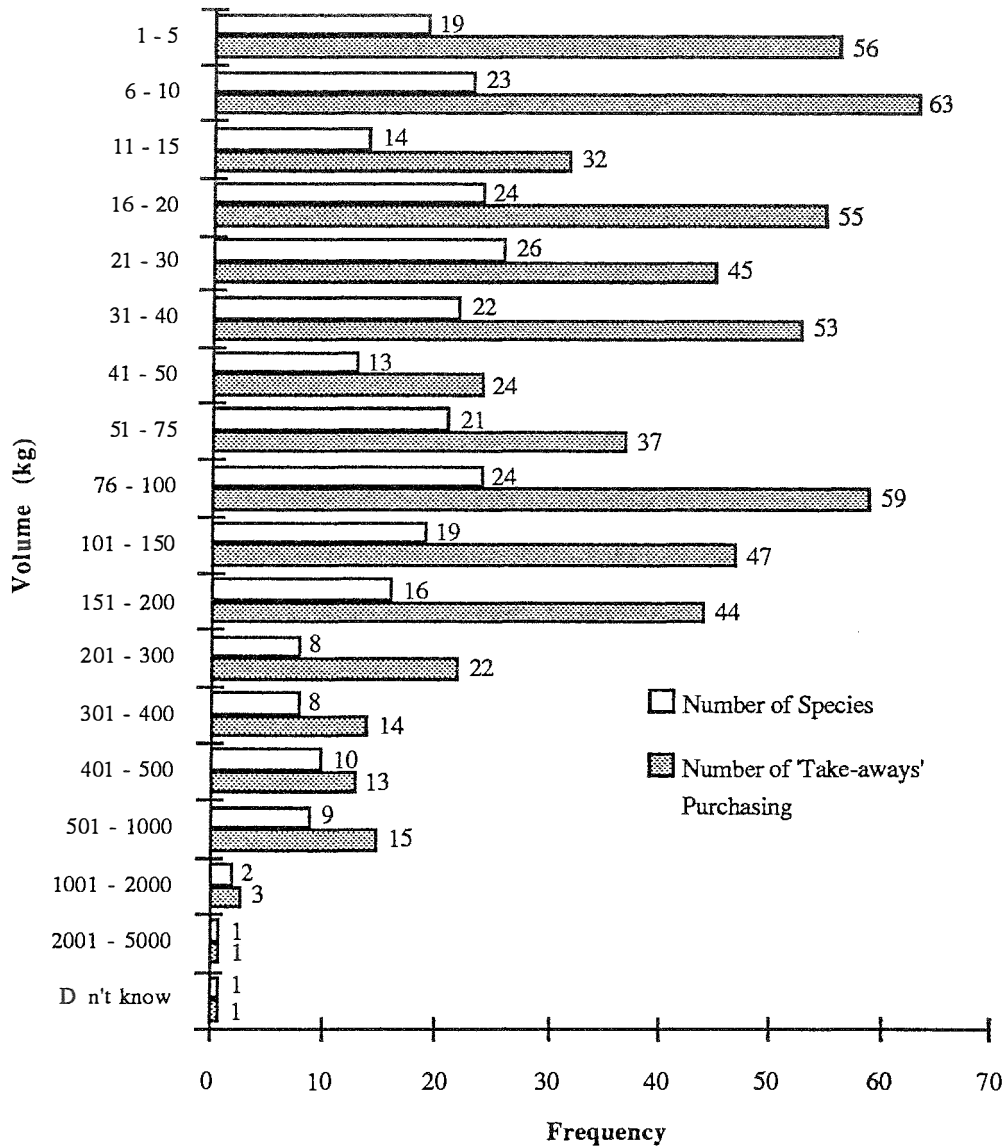
149 respondents offered 584 responses for May 1991 and September 1991 surveys (see Question 6a, Appendix III).

Figure 5.5.2: Number of 'Take-away' Outlets Which Bought Particular Species/Types of Seafood in Different Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys



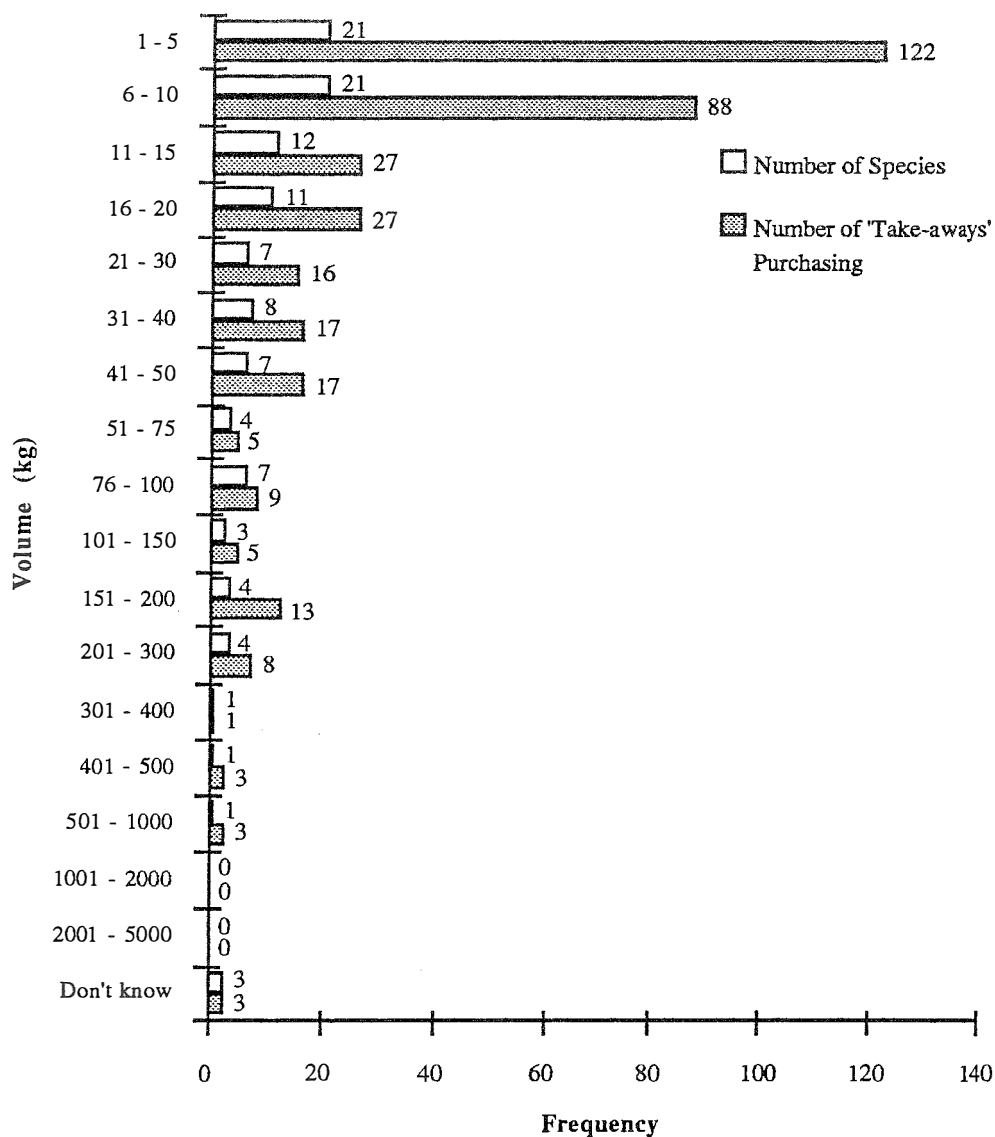
149 respondents offered 364 responses for May 1991 and September 1991 surveys (see Question 6a, Appendix III).

Figure 5.5.3: Number of 'Take-away' Outlets Which Bought the Shown Number of Species of Finfish in Particular Weight Range Lots in the Month Preceding the May 1991 and September 1991 Surveys (data aggregated across both surveys)



Respondents offered 584 responses on 52 species/types for May 1991 and September 1991 surveys (see Question 6a, Appendix III).

Figure 5.5.4: Number of 'Take-away' Outlets Which Bought the Shown Number of Species/Type of Seafood in Particular Weight Range Lots in the Month Preceding May 1991 and September 1991 Surveys (data aggregated across both surveys)



Respondents offered 364 responses on 35 seafood species/types for May 1991 and September 1991 survey (see Question 6a, Appendix III).

5.6 Stock Selection, Supplier Selection and Rating, and Customers' Perceived Criteria

When asked the reasons why the main species/types of finfish were bought for their outlets (Question 8b, Appendix III), respondents cited popularity and customer preference as the single most important reason (Figure 5.6.1) (41% of all responses). The second most frequently cited reason was “boneless/skinless”, probably reflecting both the respondents' concern with preparation time (discussed earlier) and ease of eating for the customer. The next six or so most frequently cited reasons could be briefly summarised as focusing on price, taste and quality.

The relationship between reasons and species is also revealing. Shark, whiting, orange roughy and bream drew 13.4%, 12.8%, 6.4% and 6.1%, respectively, of all responses for “popular/customers want/prefer”. Similarly, shark and orange roughy accounted for 33% and 25.3%, respectively, of all responses on “boneless/skinless”. Hake drew 31% of responses relating to “good price/cheaper/value for money” and orange roughy was responsible for 45% of responses on “good/light texture/milder flavour/white”.

When ranking the importance of 17 factors in choosing to buy loose fish and seafood (ie fresh or frozen that is sold unpackaged) from a particular supplier (Question 9a, Appendix III), the ranking of factors was quite similar to the emphasis shown by ‘restaurants’. ‘Take-away’ outlet respondents placed priority on “honest and fair in doing business”, with a cluster of five factors rated equally second (Figure 5.6.2). (As in previous instances of tied scores, factors have been ranked in descending order according to the frequency with which respondents selected “very important”, etc.)

The ranking of factors which ‘take-away’ outlets are looking for suggest priority to:

- honesty

- service
- quality
- business-like.

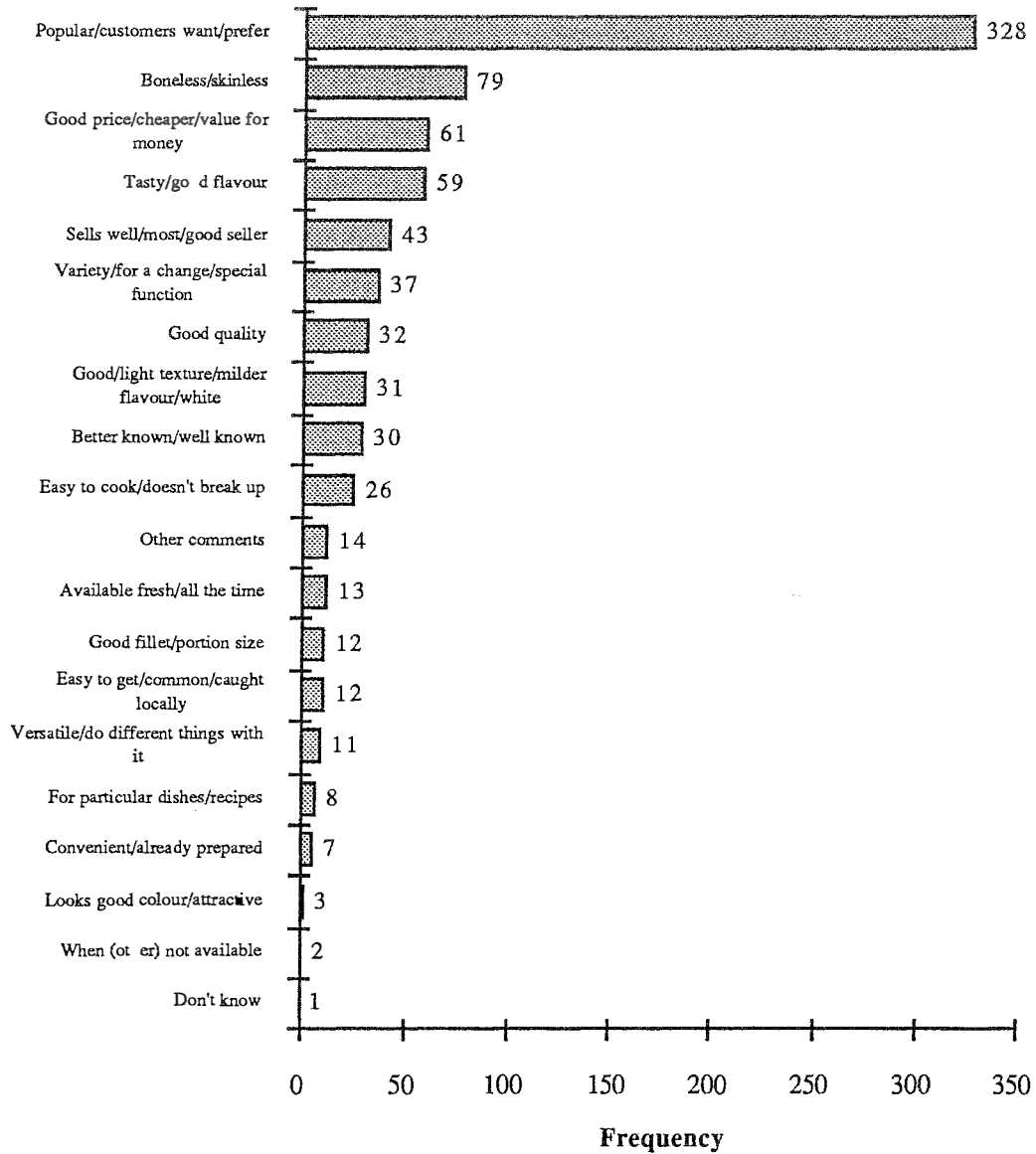
Suppliers to ‘take-away’ outlets measured up quite well against these factors (Question 9b, Appendix III), except the relative ratings of factors changed somewhat (Figure 5.6.3).

Prior to seeking ‘take-away’ outlets’ views on the factors which influence customers’ selection of a supplier of fresh or frozen fish and seafood, the survey established what proportion of outlets sold **uncooked** fish and seafood (Question 10a, Appendix III); this proportion was 49% (Figure 5.6.4). The main types of fish and seafood sold by this group of outlets are shown in Figure 5.6.5 (Question 10b, Appendix III); the major differences by comparison with Table 5.5.1 are the absence of hake from this list, and the appearance of perch and mullet on the list. Perch, in particular, is sold in substantial quantities by ‘take-away’ outlets (Table 5.5.5).

‘Take-away’ outlets’ perceptions on what customers look for in an outlet for fresh or frozen fish or seafood (Question 10c, Appendix III) placed greater emphasis on quality and service issues than price (Figure 5.6.6.). The middle ranking of one quality issue, ie “the customer can be confident that fish or seafood sold as fresh has not been frozen” possibly reflects the opinion that this is a component of the second-rated factor, ie “has a good reputation for quality fish and seafood”.

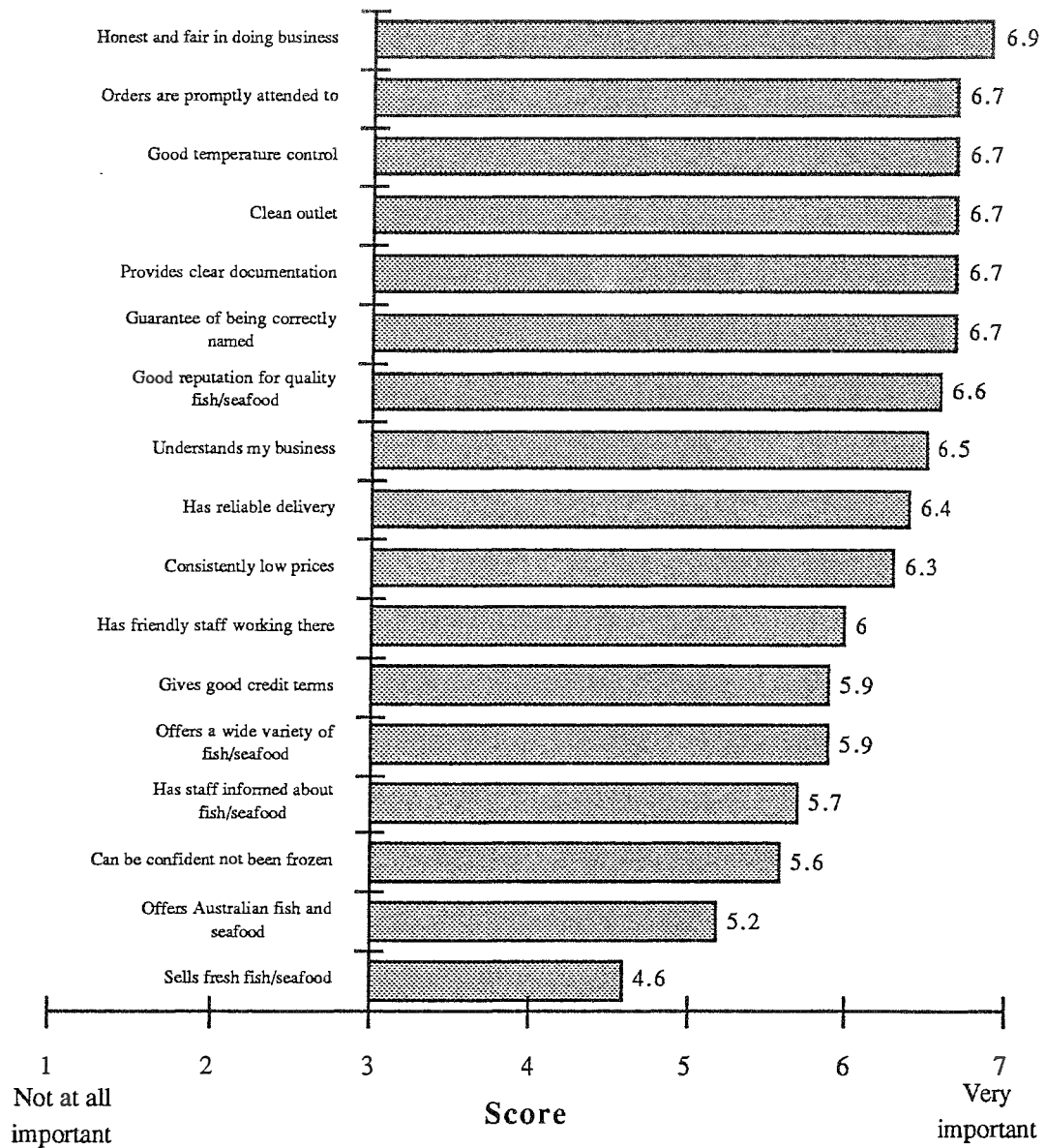
The picture changed very little when ‘take-away’ outlets were asked their perceptions about what the customers look for in an outlet which sells **cooked** fish and seafood (Question 10c, Appendix III; Figure 5.6.7).

Figure 5.6.1: 'Take-away' Outlets' Reasons for Purchase of Main Finfish



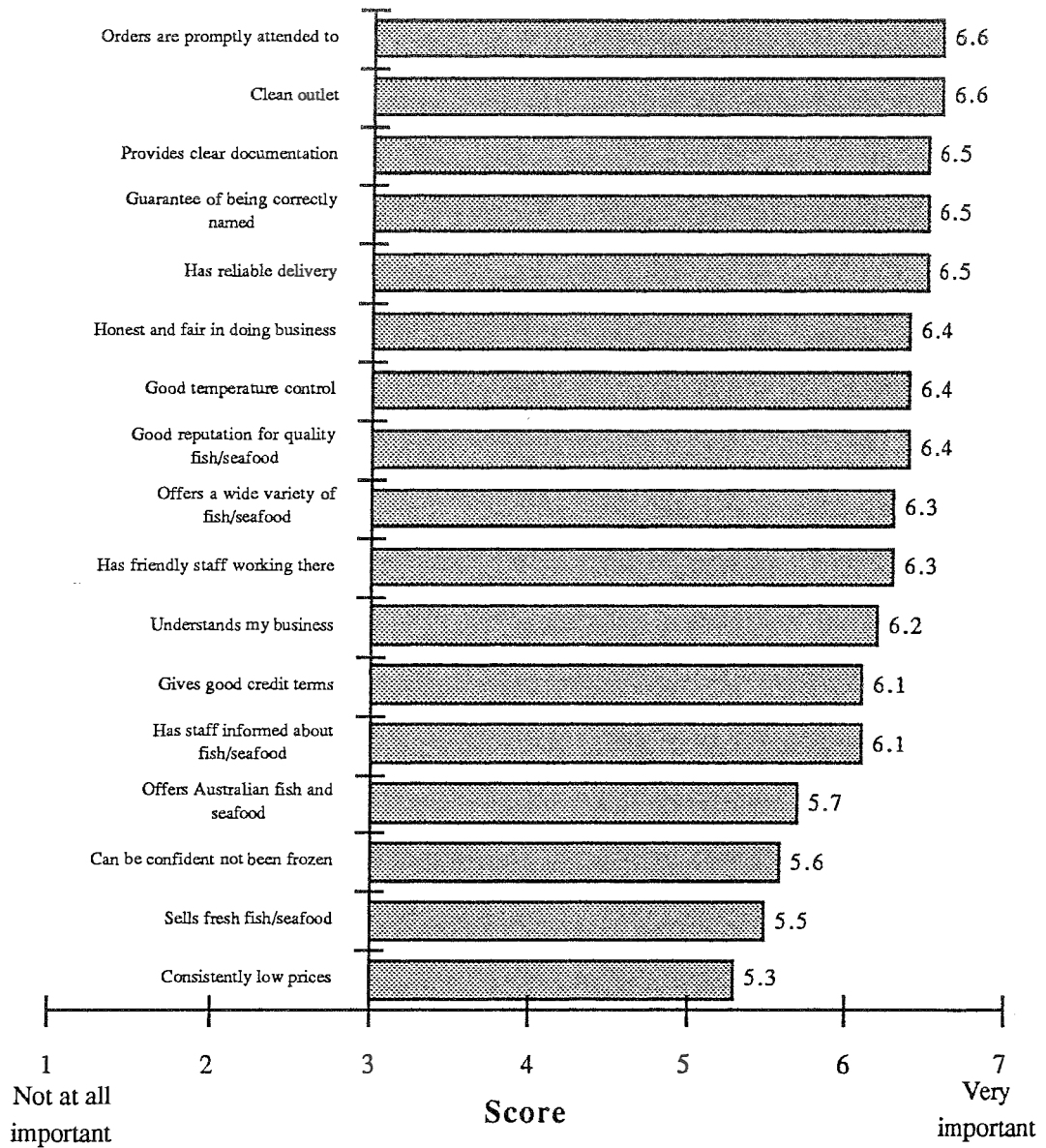
Respondents offered 809 responses on 54 fish species/types for May 1991 and September 1991 surveys (see Question 8b, Appendix III).

Figure 5.6.2: Factors Important to 'Take-away' Outlets when Choosing Suppliers



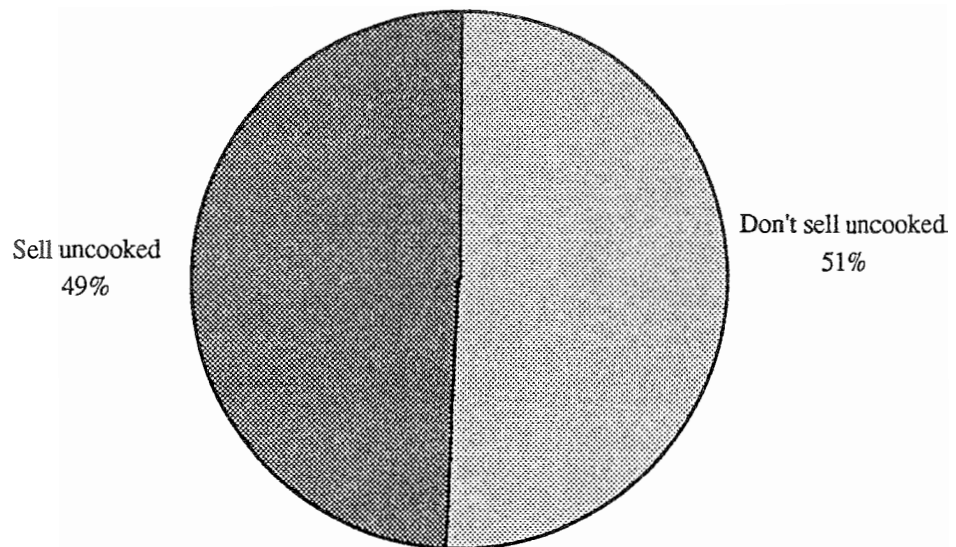
149 respondents offered ratings on each of 17 factors for May 1991 and September 1991 surveys (see Question 9, Appendix III).

Figure 5.6.3: 'Take-away' Outlets' Rating of Main Supplier of Loose Fish or Seafood



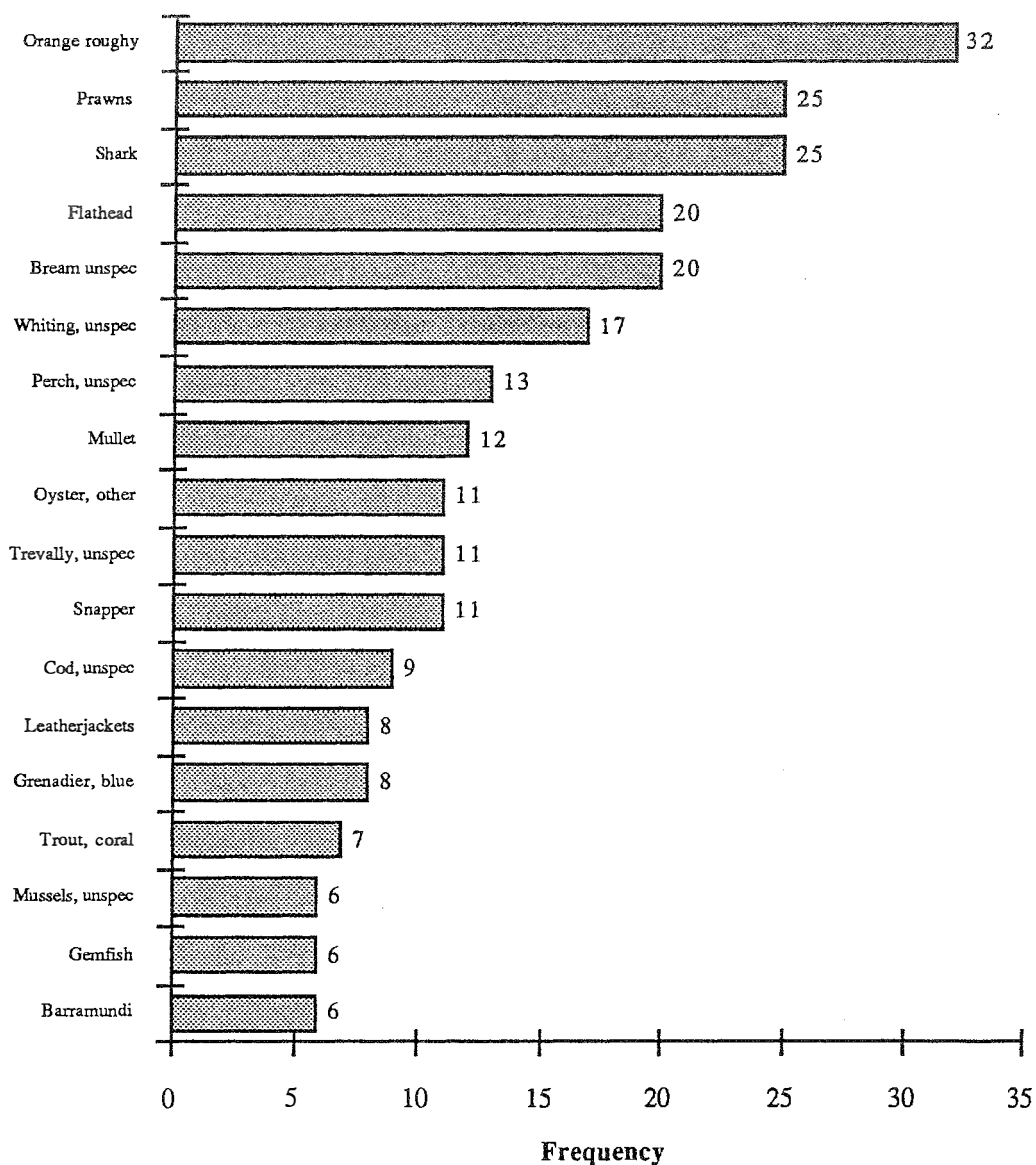
149 respondents offered responses on each 17 factors for May 1991 and September 1991 surveys, (see Question 9b, Appendix III).

Figure 5.6.4: Proportion of 'Take-away' Outlets which Sell Uncooked Fish and Seafood



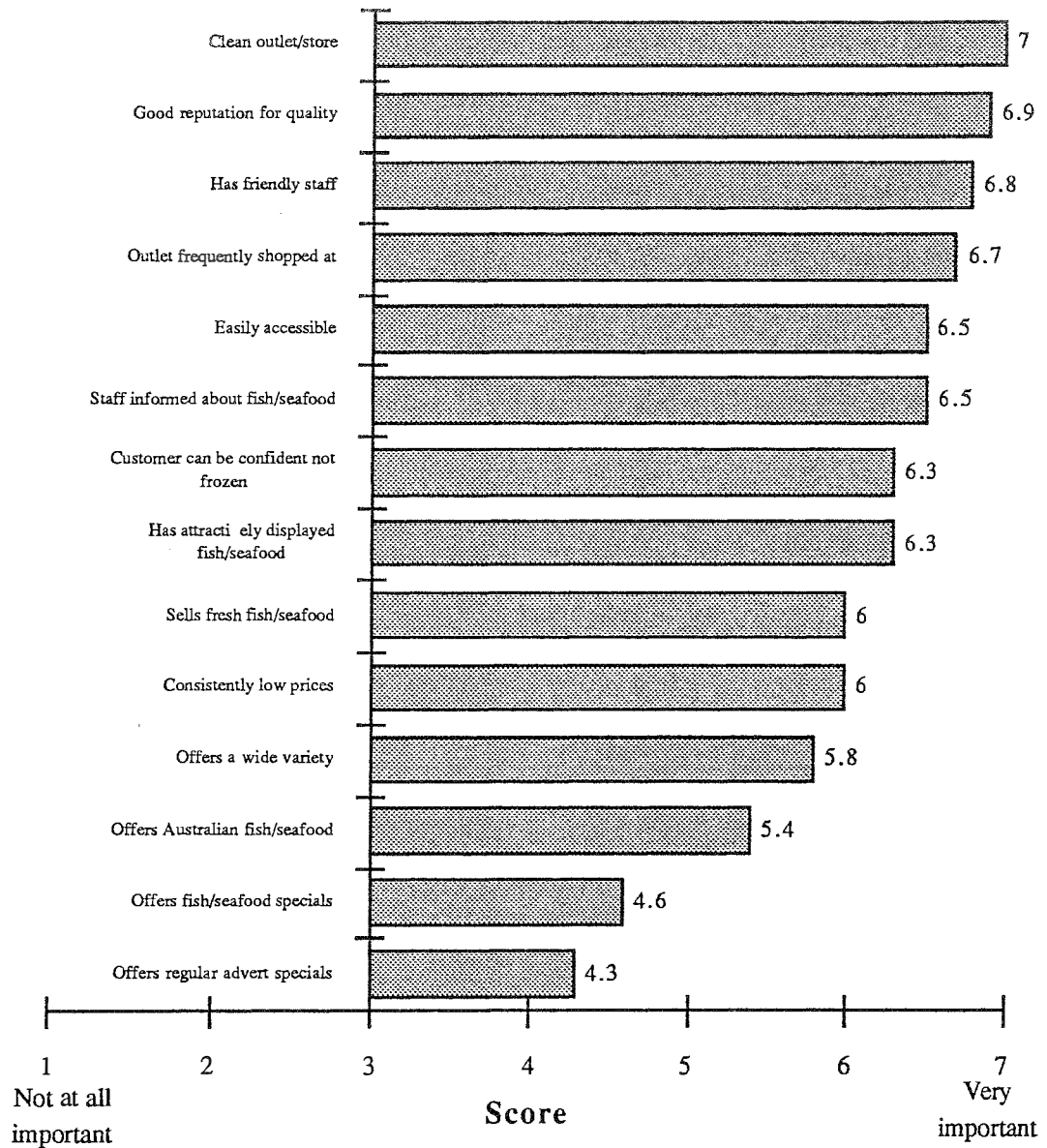
149 respondents for May 1991 and September 1991 surveys (see Question 10a, Appendix III).

Figure 5.6.5: Main Types of Uncooked Fish and Seafood Sold by 'Take-away' Outlets



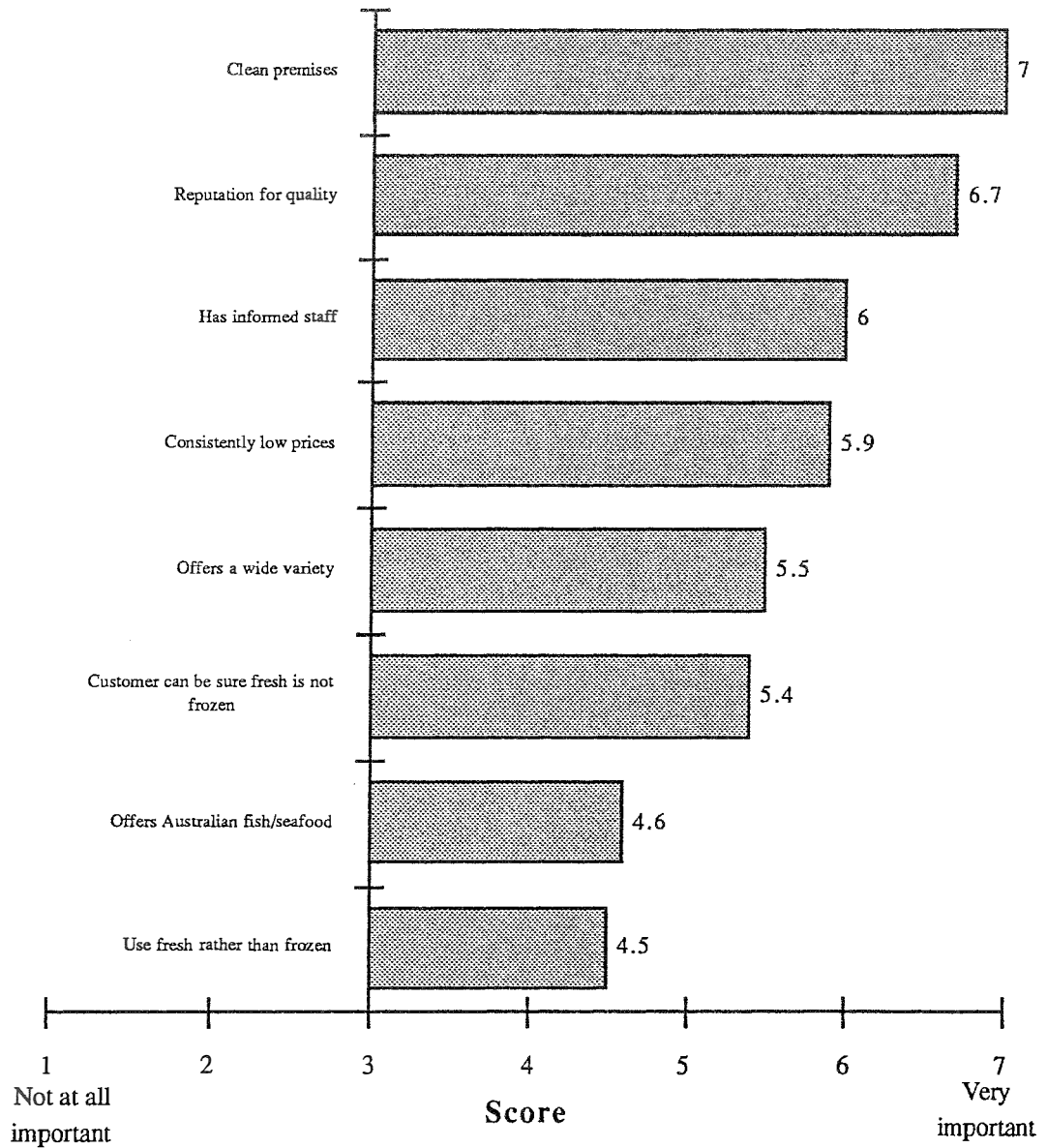
73 respondents offered 350 responses for May 1991 and September 1991 surveys. Responses for an additional 46 species/types cited less frequently are not shown (see Question 10b, Appendix III).

Figure 5.6.6: 'Take-aways' Views on what Customers Look for in a Store which Sells Fresh or Frozen Fish or Seafood



73 respondents offered responses on each of 14 factors across the May 1991 and September 1991 surveys (see Question 10c, Appendix III).

Figure 5.6.7: 'Take-aways' Views on What a Customer Looks for in an Outlet Selling Cooked Fish and Seafood



149 respondents offered responses on each of 8 factors for May 1991 and September 1991 surveys (see Question 10c, Appendix III).

5.7 Species/Types with Potential for Increased Usage

Prior to seeking respondents' views on the potential for increased usage of a range of species/types which the fishing industry regards as under-utilised, respondents were asked whether they had noticed any of four trends with their customers over the last 12 months (Question 11a, Appendix III). The majority of respondents had not noticed any trends in concern about the impact of pollution on seafood safety, grilled rather than fried fish or concern about accuracy of the names of fish sold. However, they voted almost 4:1 as discerning a trend towards less salt on food (Figure 5.7.1).

When questioned about any other recent trends in food preferences (Question 11b, Appendix III), respondents cited "nothing" four times more frequently than any other specific trend mentioned (Figure 5.7.2). The main specific trends mentioned related to a shift to healthier eating, ie:

- healthier/fresher foods/salads/fruit/vegetables
- conscious of cholesterol.

When questioned about the potential usage of eleven species of under-utilised species (Question 14a, Appendix III) respondents most frequently believed that "none" of the wild or farmed under-utilised species held any potential for increased sales (Figure 5.7.3). Squid was the under-utilised species most frequently regarded as having potential, with farm prawns second. The origin of these responses from the two categories of take-away outlets is noteworthy. "None" was chosen as the response by fish and chip shops and 'other' take-away outlets in almost equal proportion (33 and 31 responses, respectively). Squid was the second most frequent response of each of the two categories (30 and 13 responses, respectively). Whereas fish and chop shops favoured farm prawns as their third selection (26 responses), 'other' take-aways favoured silver trevally/skippy (9 responses).

Statistically significant differences also emerged between store type, with the number of fish and chip shops coming out in favour of the potential of farm prawns, Atlantic salmon and farm barramundi at an above average frequency (95% confidence limits). The number of other take-away outlets expressing confidence of the potential of farm prawns, Atlantic salmon and farm barramundi was less than average (95% confidence limits).

Where species were believed to hold some potential, the least frequently cited reason for this was “health benefits” (Figure 5.7.4).

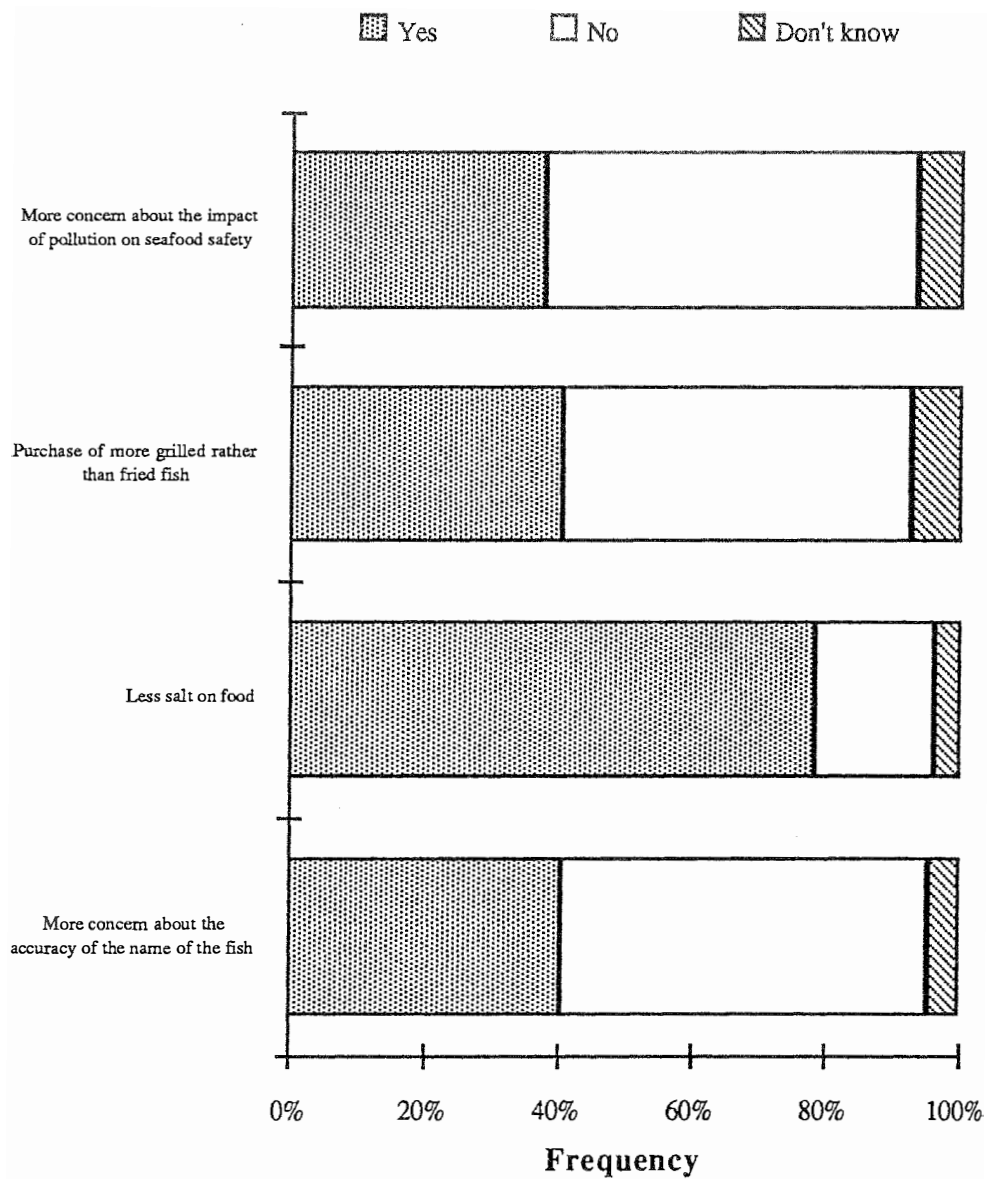
As with data on the frequency of sales of fish and seafood species/types, some interesting regional differences emerged regarding views on the potential for increased sales from under-utilised species (Question 14b, Appendix III). First, responses to “none” having potential came with above average frequency from Melbourne and below average frequency from Sydney (99.9% confidence limits). Squid, the species most frequently cited as offering potential, was more favoured by Sydney (95% confidence limits). Farm prawns, rainbow trout, Atlantic salmon, mussels and oysters were also cited by Sydney ‘take-aways’ as having potential at an above average frequency (99.9% confidence limits for the first two, 99% for the remainder).

Conversely, Melbourne ‘take-away’ respondents shunned the potential of farm prawns, farm barramundi, rainbow trout and Atlantic salmon more frequently than average (all significant at 95% confidence limits, except for farm prawns at 99% confidence limits).

Jack mackerel was the under-utilised species least frequently cited as having potential for increased sales. The three least favoured species (Jack mackerel, pilchards, Australian herring/Tommy ruff) were all wild.

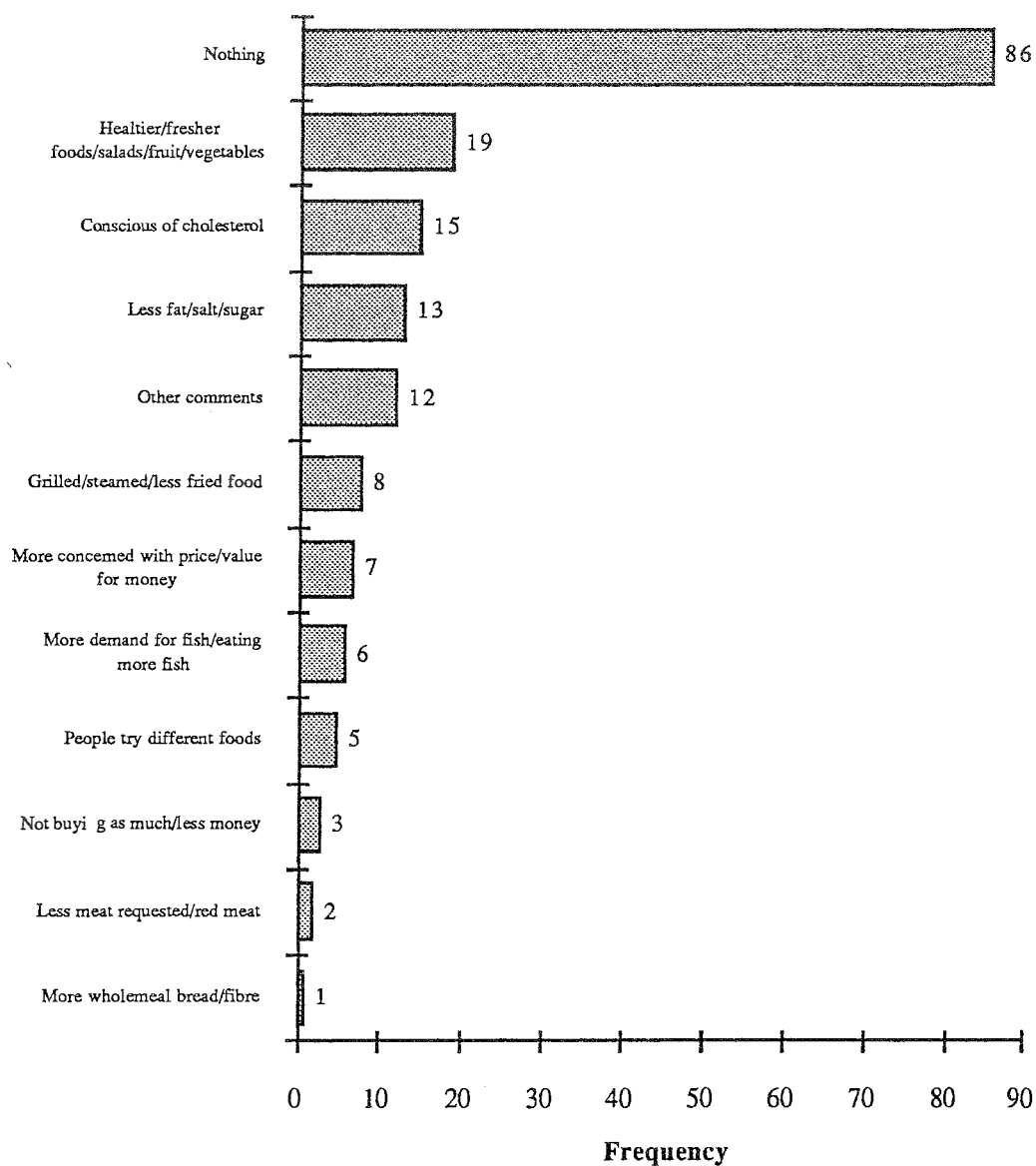
Looking at the data regarding reasons for believing potential lies with underutilised species, 32% of citations for “popular fish/in demand” related to squid, while pilchards were unique in receiving no responses against that, or the next two most frequent, reasons. Atlantic salmon was most frequently associated with “good flavoured fish” and “always available/constant supply (if farmed)” (20% and 22% of these responses, respectively).

Figure 5.7.1: Trends with Customers' Food Preferences Noticed by 'Take-aways' over the Last 12 Months



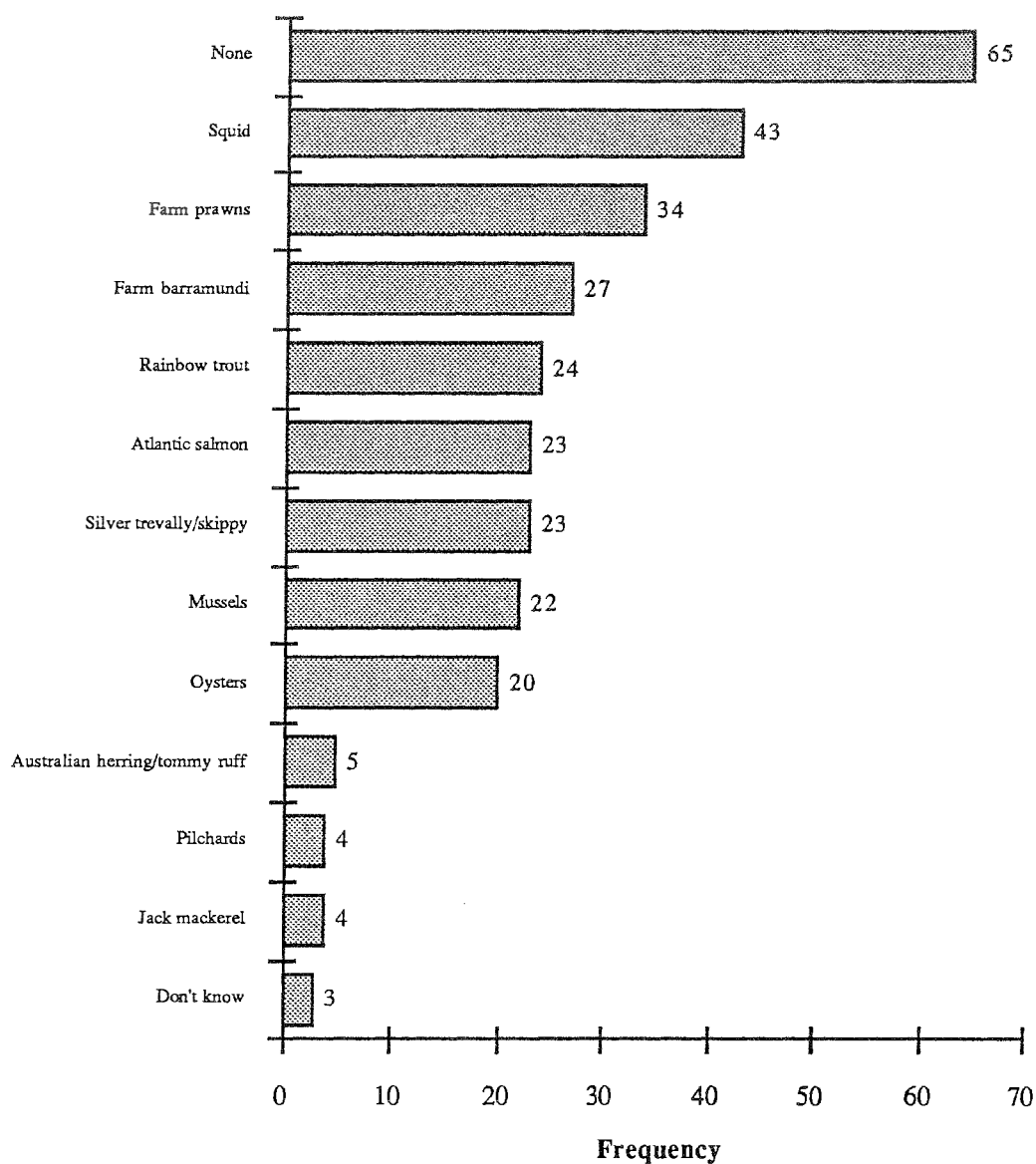
149 respondents offered responses on each of four trends for May 1991 and September 1991 surveys (see Question 11a, Appendix III)

Figure 5.7.2: Other Trends in Food Preferences in Last 12 Months Noted by 'Take-away' Outlets



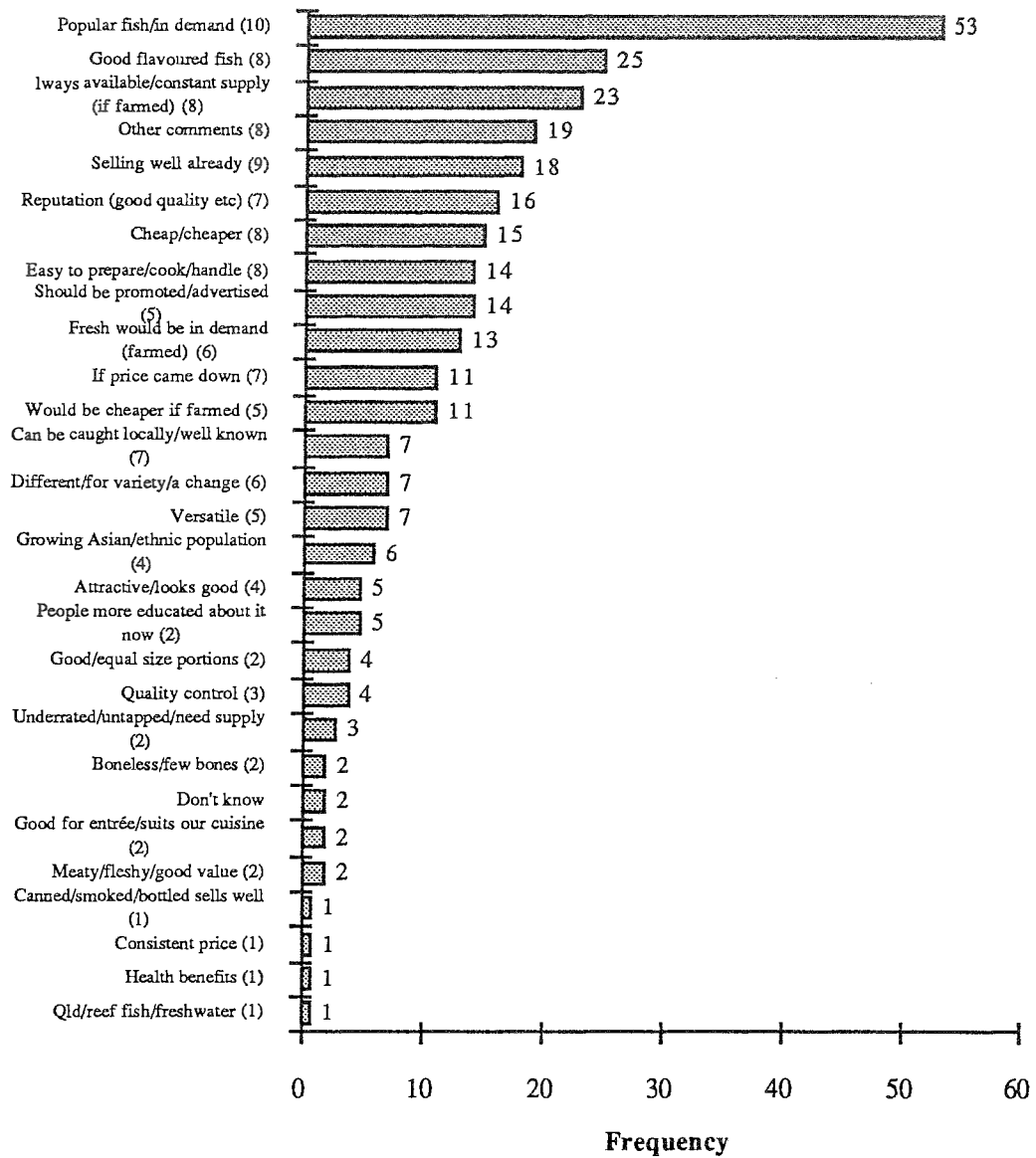
149 respondents offered 177 responses for May 1991 and September 1991 surveys (see Question 11b, Appendix III)

Figure 5.7.3: Under-utilised Species with Potential for Increased Sales by 'Take-aways'



149 respondents offered 297 responses for May 1991 and September 1991 surveys (see Question 14a, Appendix III)

Figure 5.7.4: Reason for Believing Potential Lies with Under-utilised Species



Respondents offered 292 responses for May 1991 and September 1991 surveys. Numbers in parentheses after 'reasons' refer to numbers of species cited (see Question 14b, Appendix III)

5.8 'Take-away' Outlet and Industry Initiatives to Sell More Fish

'Take-away' outlets had a frequent opinion that there were no problems in selling fish and seafood. Consistently perhaps, when asked what actions need to be taken for (by) their outlets to stock and sell more fish and seafood products (Question 12a, Appendix III) the most frequent response was "none" (Figure 5.8.1). Price reductions, increased customer demand and more advertising were the next most frequently suggested actions.

Initiatives by 'take-away' outlets to make the public more aware of the health benefits of fish and seafood were relatively infrequently suggested. The response "lower/more reasonable prices/specials" came from Melbourne respondents at an above average frequency (99.9% confidence limits). Several of the less frequently cited actions came from Sydney at above average frequencies (either 95% or 99% confidence limits), ie "more advertising/promotions", "better/more display area/presentation", "ensure good quality", "space/increase store size".

'Take-away' respondents saw a role for the fishing industry in achieving reduced or less variable prices for fish and seafood (Question 12b, Appendix III), along with enhanced promotion, advertising and better information. The most frequently cited positive attribute for action was the health features of fish and seafood (Figure 5.8.2). Perhaps reflecting a general feeling of well being in the industry (or dissatisfaction with previous industry actions), the third most frequently cited action was "nothing".

A higher than average number of calls for action from the industry regarding more advertising and promotion came from Sydney (99% confidence limits), while Melbourne respondents stressed action on more education on the health features of fish at above average frequency (95% confidence limits).

'Take-away' outlet respondents were asked their views on the likelihood that all or any of ten specific actions (identified by food preparers, through prior research) would lead to an increase in purchases of fish and seafood by that outlet (Question 13, Appendix III). "More advertising support for fish and seafood" was considered the most likely to lead to increased purchases by outlets. The impact expected of other actions ranged only between "somewhat likely" (4), through "neither likely nor unlikely" (3) "to somewhat unlikely" (2), (Figure 5.8.3).

Respondents were generally optimistic that their sales of fish and seafood would increase over the next five years (Question 15a, Appendix III; Figure 5.8.4). The number of respondents from Melbourne expecting an increase in sales was lower than average, while "don't know" responses were higher (both at 95% confidence limits).

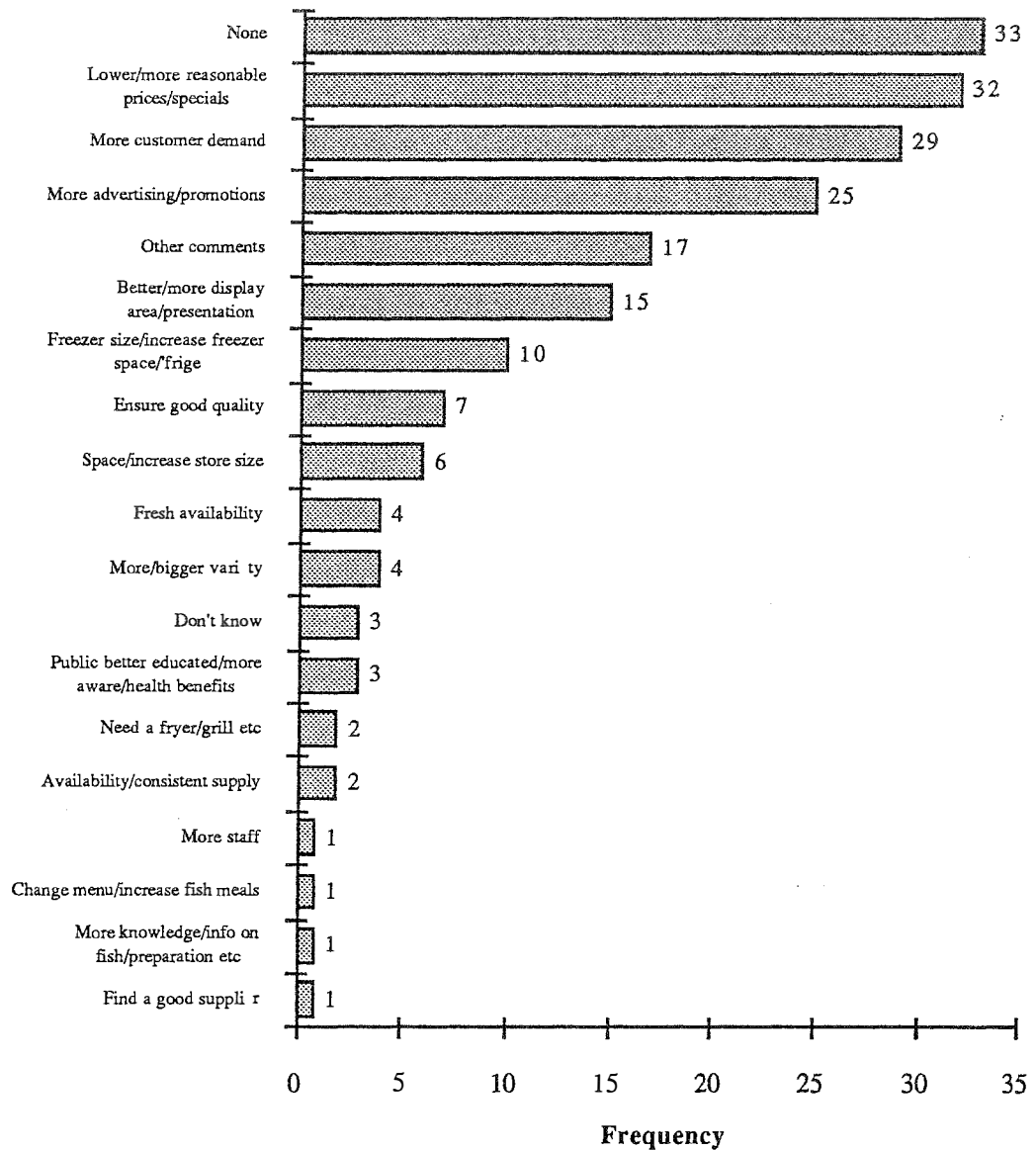
The two most frequently cited reasons (Question 15b, Appendix III) justifying increased sales expectations were:

- people becoming more health conscious, and
- people eating more fish (Figure 5.8.5).

The next specific pair of reasons captured the negative views, ie

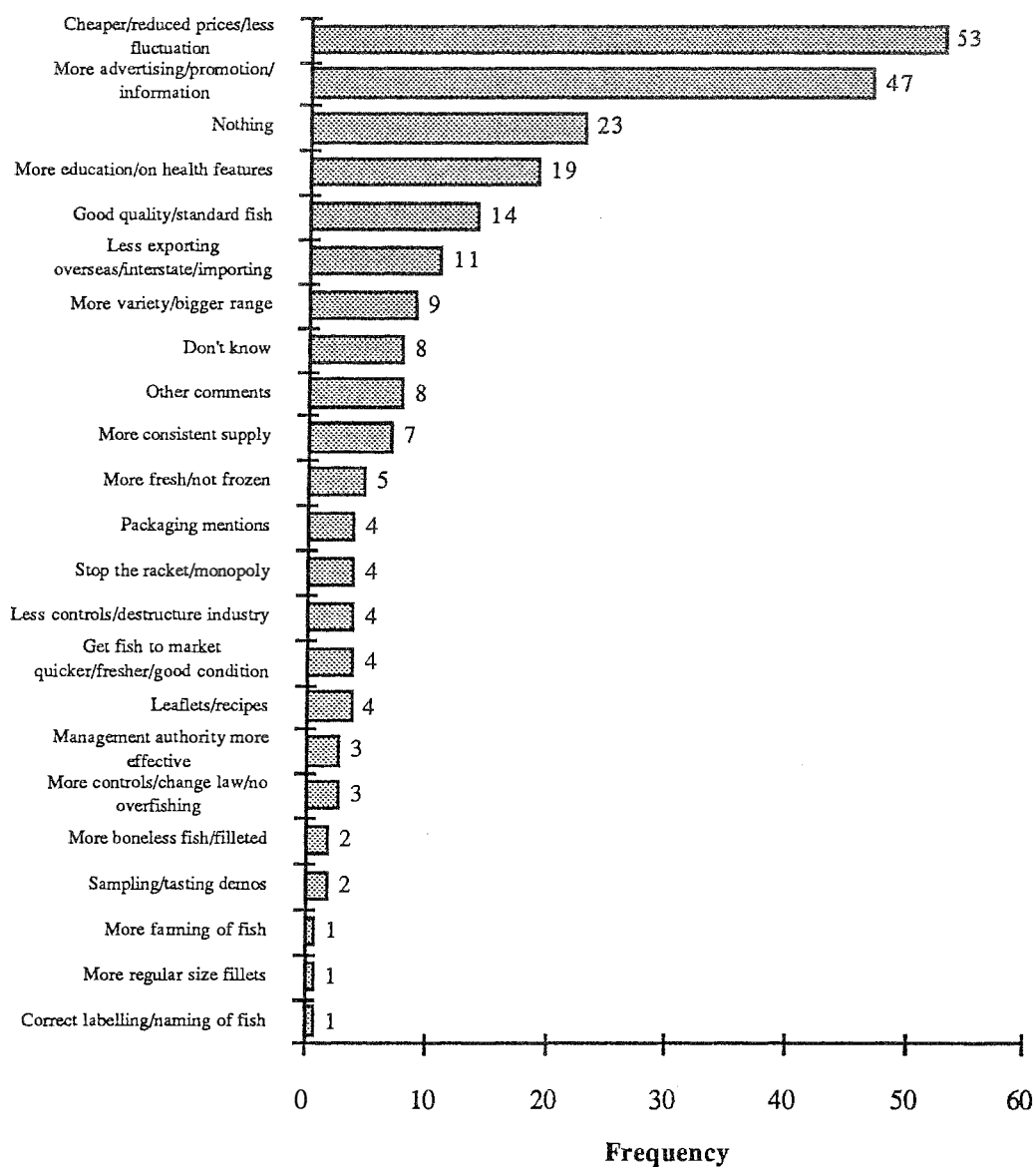
- too much competition, and
- becoming too expensive/people can't buy.

Figure 5.8.1: Action Needed for 'Take-away' Outlets to Stock/Sell More Fish



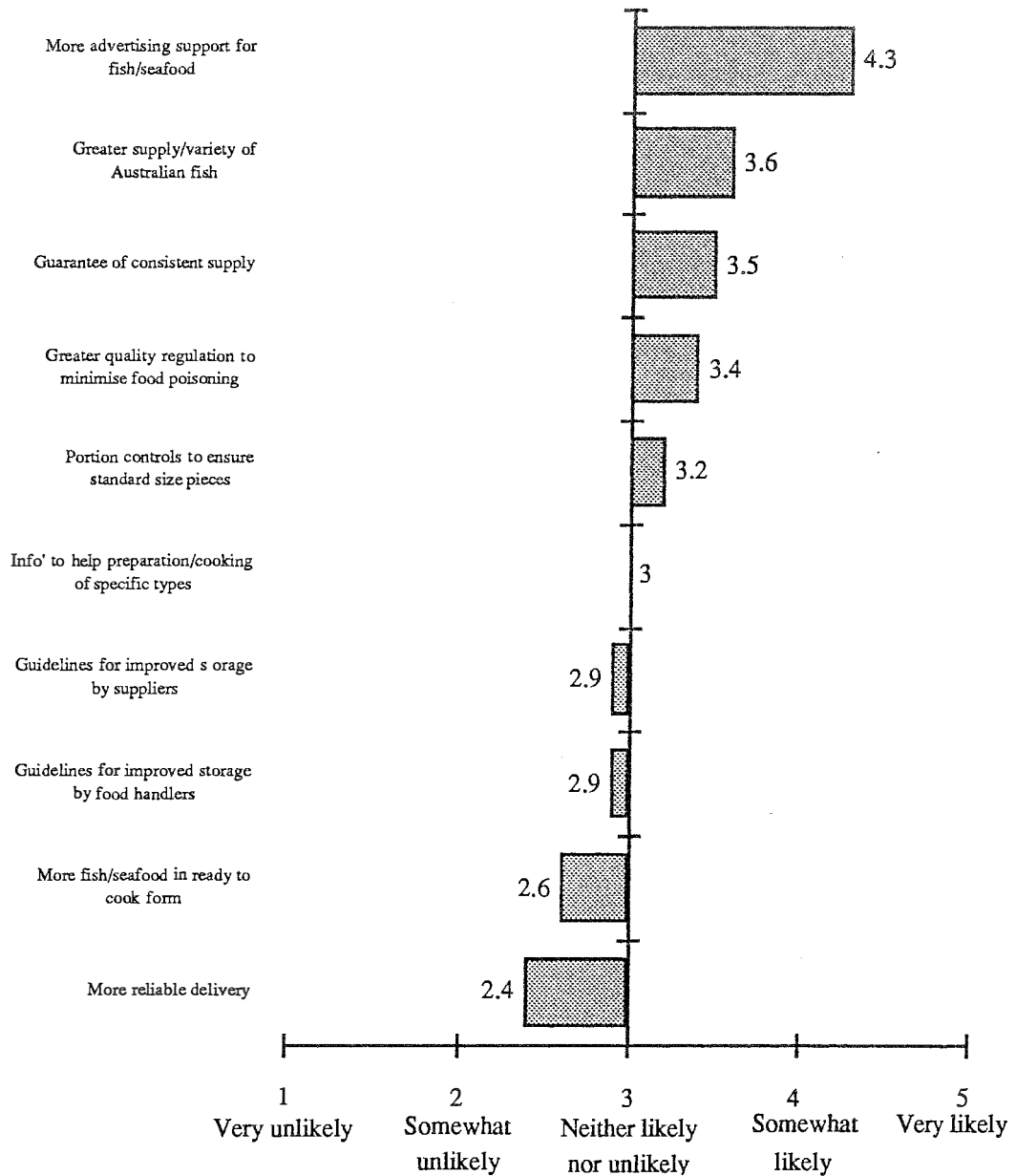
149 respondents offered 196 responses for May 1991 and September 1991 surveys (see Question 12a, Appendix III)

Figure 5.8.2: Action Needed by Fishing Industry for 'Take-away' Outlets to Sell More Fish and Seafood



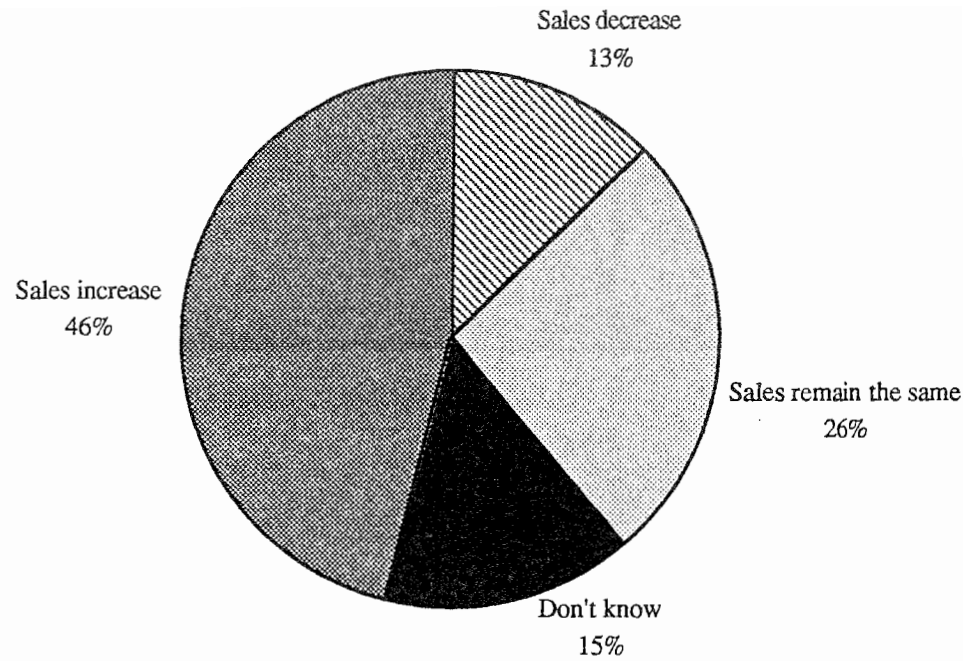
149 respondents offered 237 responses for May 1991 and September 1991 surveys (see Question 12b, Appendix III).

Figure 5.8.3: Likelihood of Actions Leading to Increase in Fish and Seafood Produce Purchases by 'Take-away' Outlets



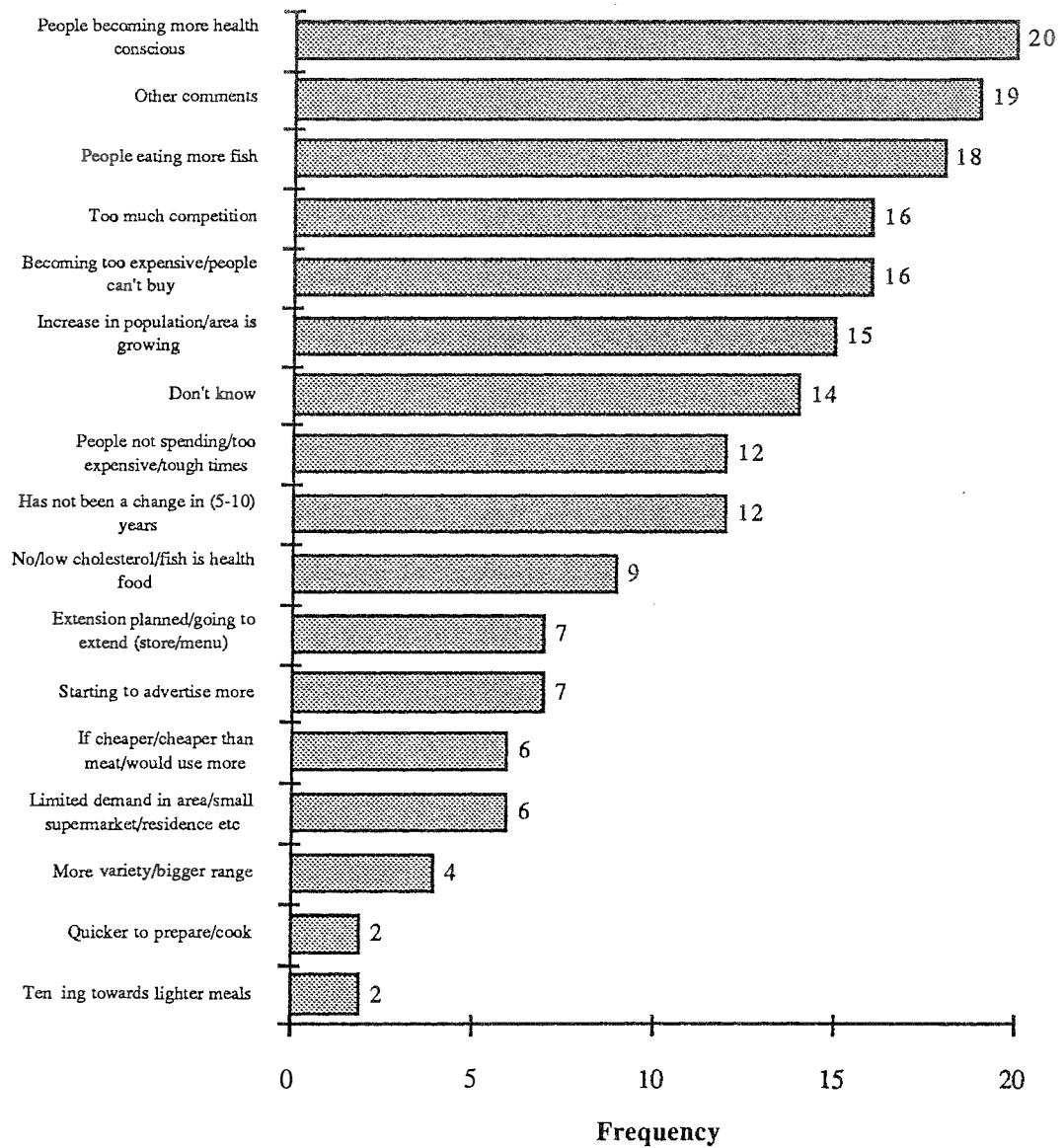
149 respondents for May 1991 and September 1991 surveys (see Question 13, Appendix III).

Figure 5.8.4: 'Take-away' Outlet Respondents' Opinions of Sales of Fish and Seafood over the Next Five Years



149 respondents offered 149 responses for May 1991 and September 1991 surveys (see Question 15a, Appendix III).

Figure 5.8.5: Reasons for 'Take-away' Respondents' Opinion of Expected Fish Sales



149 respondents offered 185 responses for May 1991 and September 1991 surveys (see Question 15b, Appendix III).

5.9 Business Details - Turnover and Staff

The high rate at which respondents refused to disclose even general turnovers detracted from the value of this data set (Question 16a, Appendix III). Nevertheless, the majority of 'take-away' outlets had weekly turnovers of under \$5,000 while 18% disclosed turnovers in the range \$6,000 - \$10,000 per week (Figure 5.9.1).

When asked about the proportion of average weekly sales due to fish and seafood, a bi-modal distribution emerged, with peaks at the 1%-10% and 71% - 80% ranges. The sample average was 47.7%.

Predictably, the bi-modal distribution of sales reflects the two distinct categories of 'take-away' outlets and their businesses (Figure 5.9.2). Fish and chip shops tend to have a high proportion of their sales coming from fish and seafood sales (most frequently 71 - 80% of sales) while other take-away outlets are less dependent on fish and seafood sales (most frequently 1 - 10% of sales). The average percentage of average weekly sales due to fish and seafood for each category was 64.6% for fish and chip shops and 24.2% for other take-away outlets.

Respondents were as cautious about disclosing a value range for average weekly sales due to fish and seafood; the percentage who refused to answer was 26% (c.f. 33% in Figure 5.9.1). The most frequently nominated range was \$2,001 - \$ 5,000 per week (17% of respondents), and the sample group average was \$2,153.10. The reported average for Sydney respondents was triple that of Melbourne respondents (\$3,355 per week versus \$1,118 per week).

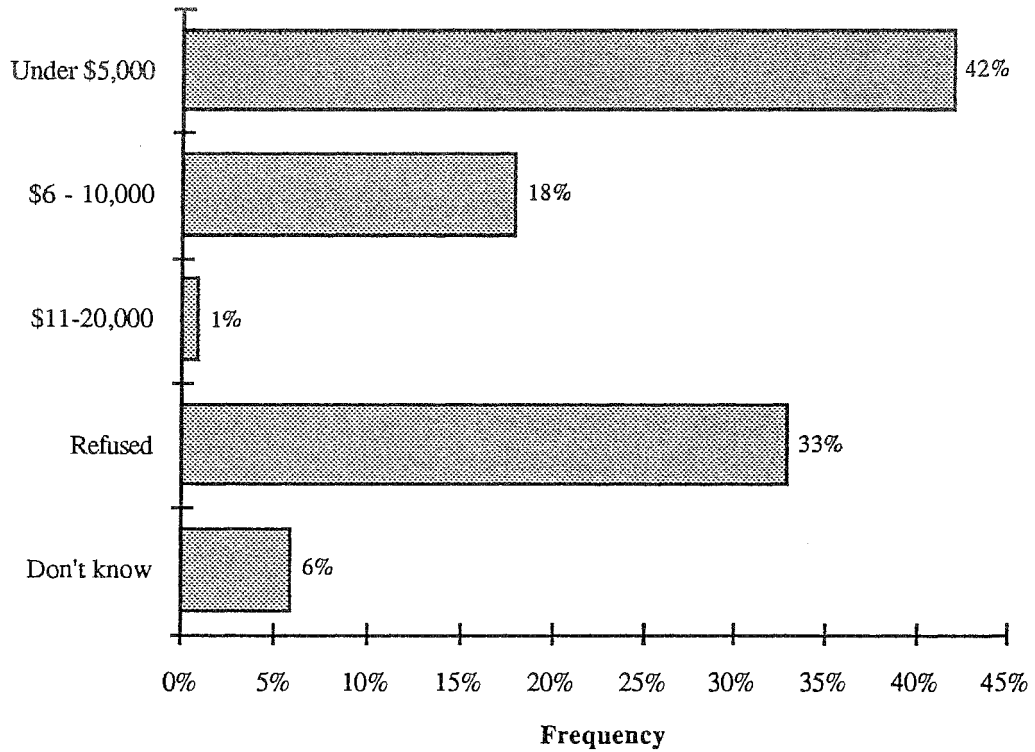
With respect to sales of **uncooked** fish and seafood, most respondents (51%) reported no sales from this category; 80% of respondents took 20% or less of sales from uncooked fish and seafood (Figure 5.9.3).

The average number of full time staff employed at 'take-away' outlets was 1.9, with "two full time staff" being the most frequently cited category (56% of responses).

Similarly, the average number of part time staff was also two per outlet. The most frequently cited categories were '0' and '1' part time staff (32% and 23% respectively), but these low rates were offset by some outlets employing 11 - 20 part timers.

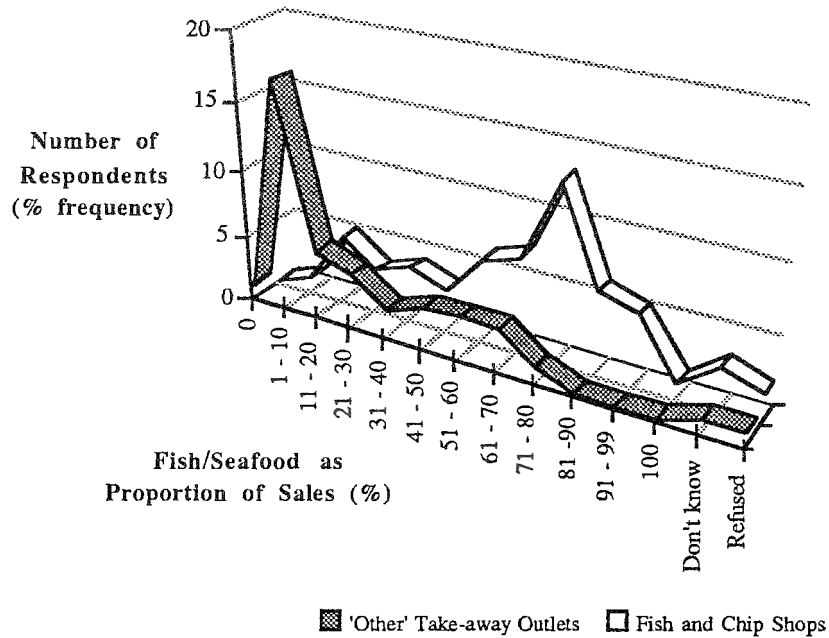
Out of the sample of 149 'take-away' outlets, none had ownership ties with either a fish and seafood wholesaler or fish and seafood processor. However, two had ties with a fish and seafood retailer (ie uncooked sales), and two had ties with another retailer selling cooked fish and seafood (Question 18, Appendix III).

Figure 5.9.1: Average Weekly Turnover of 'Take-away' Outlets Interviewed



149 respondents offered a response each for May 1991 and September 1991 surveys (see Question 16a, Appendix III)

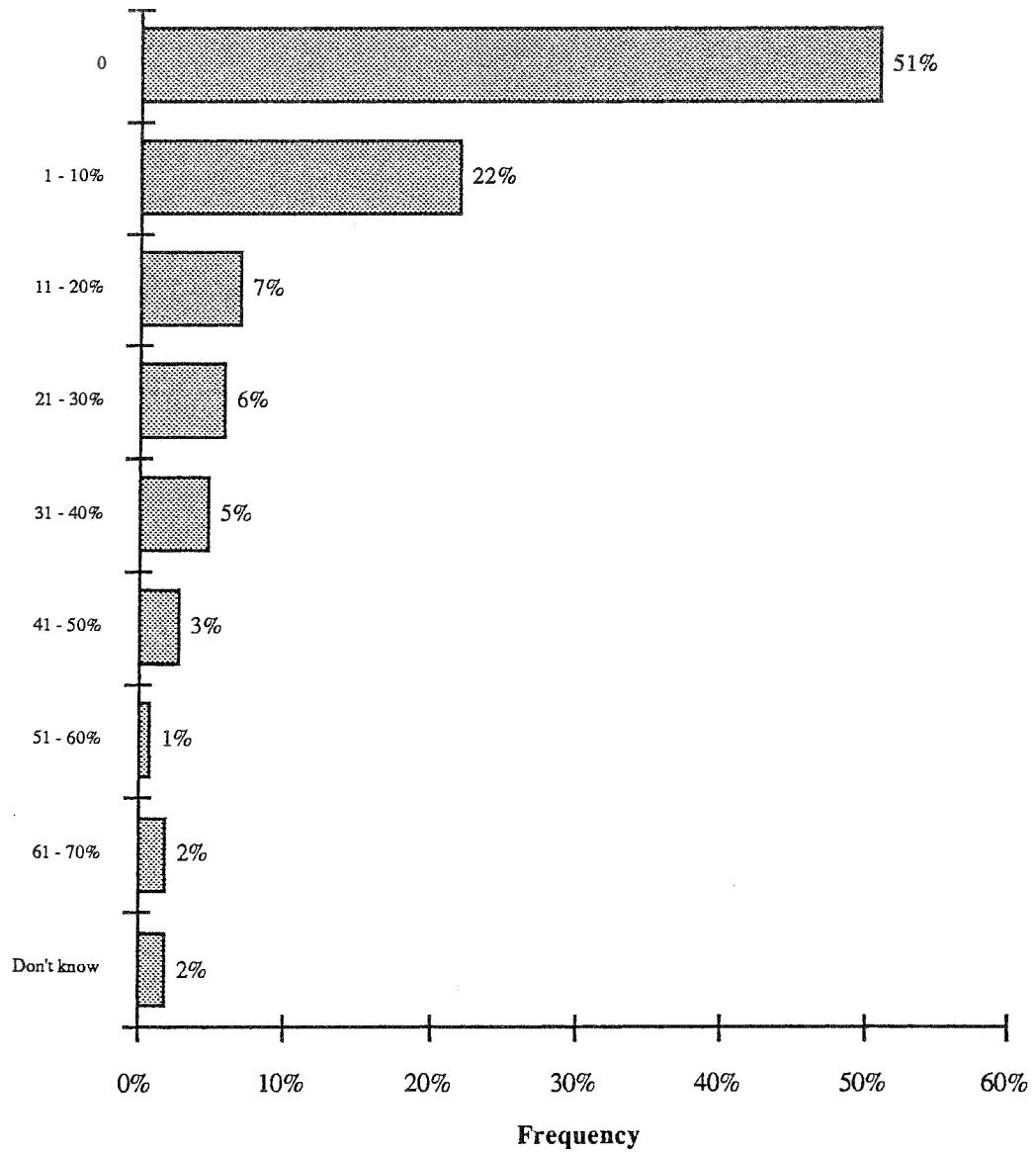
Figure 5.9.2: Proportion of Average Weekly Sales at Fish and Chip Shops and Other Take-away Outlets Accounted for by All Fish and Seafood Products



Fish/seafood as proportion of average weekly sales (%)	Sample Frequency ⁽¹⁾			
	'Other' Take-away Outlets		Fish and Chip Shops	
0	2	1%	0	0%
1 - 10	26	17%	1	1%
11 - 20	7	5%	7	5%
21 - 30	6	4%	5	3%
31 - 40	3	2%	6	4%
41 - 50	4	3%	5	3%
51 - 60	4	3%	9	6%
61 - 70	4	3%	10	7%
71 - 80	2	1%	19	13%
81 - 90	0	0%	9	6%
91 - 99		0%	8	5%
100		0%	1	1%
Don't know	2	1%	4	3%
Refused	1	1%	3	2%

⁽¹⁾ 149 respondents offered 149 responses across the May 1991 and September 1991 surveys (see Question 16b, Appendix III).

Figure 5.9.3: Percentage of 'Take-away' Sales due to Uncooked Fish/Seafood



149 respondents offered a response each for May 1991 and September 1991 surveys (see Question 16c, Appendix III).

6. Analysis of Perceptual Maps

6.1 Introduction to Perceptual Maps

This report has made reference (Section 3.3 and 4.3) to analysis of the perceptions of trade suppliers to a range of six protein sources. Previous discussion has presented superficial comment on trade suppliers' perceptions across 22 - 25 statements or attributes regarding protein sources.

This Section of the report presents a thorough analysis of suppliers' perceptions, along with the perceptual maps supporting these analyses. It is important to be aware of several points regarding the structure and interpretation of the perceptual maps shown later, ie:

- findings are presented on a matrix, generated using a correspondence analysis algorithm. Thus the scales on the matrix relate to this correspondence analysis, and are not to be interpreted in the sense of conventional *x*- and *y*- axes in a graphical representation
- the 'total retention' value is an estimate of the variability in responses to statements/attributes which is retained on the map. As a rule of thumb, interpretation can proceed confidently when the sum of the two values quoted exceeds 75%
- attributes are positioned on the map according to the pattern of responses given by respondents, and protein sources then mapped against these attributes according to scores generated through the correspondence analysis
- the dots alongside statements/attributes represent the actual location of that attribute on the map.

6.2 Caterers

Main buyers in a sample of 101 caterers located in the six state capital cities, including contract caterers, and those operating in-house and off-premises, were shown a list of 25 statements about meat, pork, poultry, fresh or frozen fish, prepared fish products and canned fish and seafood products. They were asked to associate each of the statements with one or more of these protein sources, or none of them. The results are presented in the attached perceptual map, which is generated using a correspondence analysis algorithm (Figure 6.2.1). It should be noted that 13 statements do not appear on the map, either because of the relatively high level of “don’t know” or non-response, or because they were found not to contribute significantly to perceptual differentiation between the six protein sources.

In parts of the discussion that follows, the rank of protein sources in respect of the strength of the association to a particular statement is discussed. The ranking is derived from the proportion of respondents who associated the statement with each protein source - it is not drawn from the perceptual map. The perceptual map should be seen merely as a technique with which to highlight strong and very weak associations between statements and protein sources.

It can be seen that **prepared fish products and canned fish and seafood** have the lowest levels of association among the six protein sources investigated, on all but two of the thirteen statements. **Canned fish and seafood** are the protein sources most likely to be seen as taking up little storage space. Like all the other protein sources, except fresh or frozen fish, the canned and prepared fish categories are seen as easily available to buy, and easy to prepare.

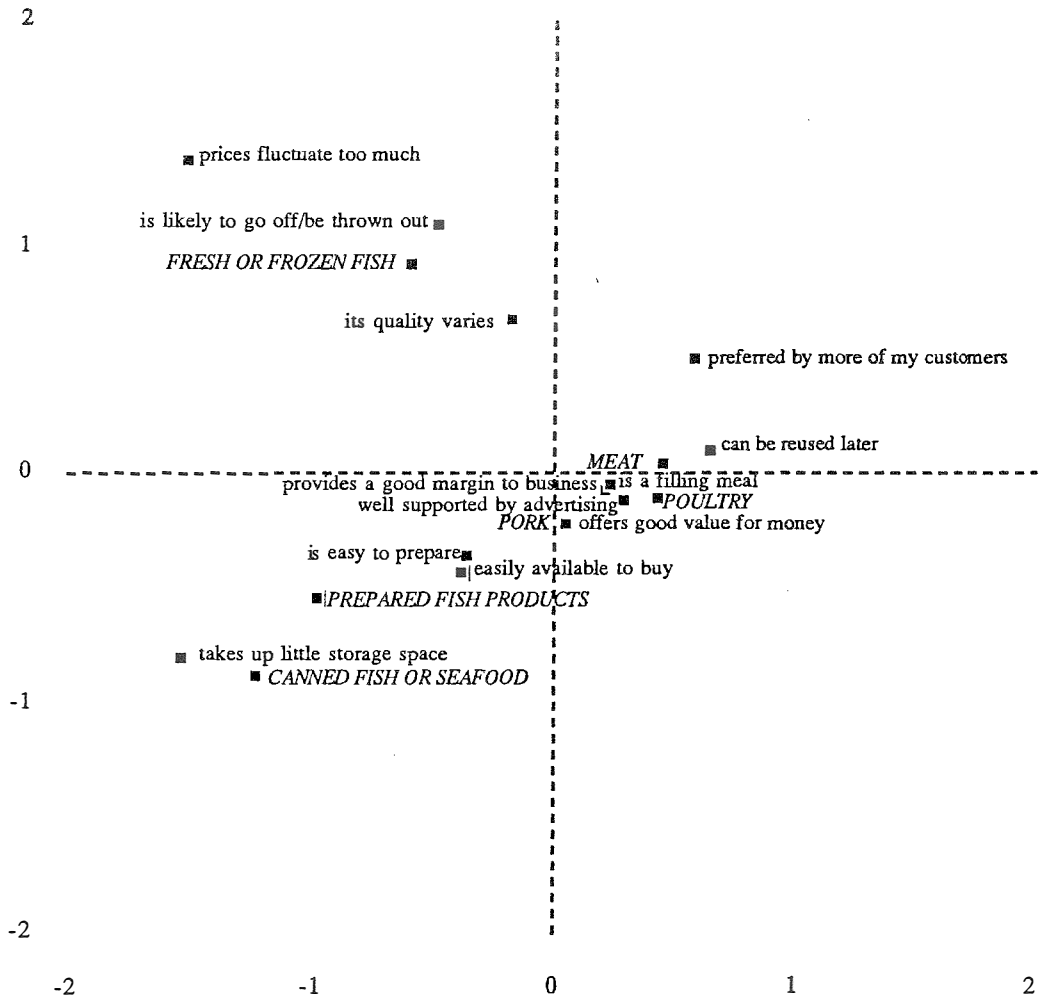
Caterers tend to associate **fresh or frozen fish** with a number of negative perceptions. The prices are thought to fluctuate too much; it is thought likely to go off and have to be thrown out; and its quality is thought to vary. It is thought to take up too much storage space, but is less likely to be preferred by customers than either **meat** or **poultry**. In fact, **all three fish products have a generally less favourable image than the other protein sources investigated with caterers.**

Poultry has the best image among the six protein sources. It is considered most likely to provide a good margin to the catering business; to offer the business good value for money; and to be easy to prepare. It is considered easily available to buy, and able to be reused later after it has been initially cooked. Second to **meat**, it is preferred by more customers and considered a filling meal, but second to **fresh or frozen fish**, it is seen as likely to go off and have to be thrown out. It is thought to be better supported by advertising than any of the three categories of fish products, to be less likely to suffer from quality variations than **meat, pork** or **fresh and frozen fish**, and to be the protein source for which prices fluctuate least widely.

Meat also has a strong positive image among caterers. It is thought to be the protein source most easily available to buy; it is most likely to be regarded as a filling meal; to be preferred by more customers; to be able to be reused later after it has been cooked initially; and to be well supported by advertising. However, it is the protein source considered most likely to vary in quality, and equal second with pork to **fresh and frozen fish**, is thought to be disadvantaged by prices fluctuating too widely. It is seen as easy to prepare, to offer the business good value for money, and to provide a good margin to the catering business. Apart from **prepared fish products**, and **canned fish and seafood**, it is the least likely protein source to go off and have to be thrown out.

Pork is generally perceived by caterers as having a more positive image than any of the three categories of fish product, but an inferior perception to **poultry** or **meat**. It is considered to be relatively well supported by advertising (second to **meat**), and to take up little storage space (second to **prepared fish products**). **Pork** is preferred by fewer customers than **meat**, **poultry**, or **fresh and frozen fish**.

Figure 6.2.1: Perceptual Map of Caterers' Attitudes to Protein Sources



Total retention = 50.2 + 33.1

6.3 Restaurants, Social and Sporting Clubs, Hotels and Motels

Main buyers in a sample of 202 restaurants, social and sporting clubs, and hotels and motels, located in the six state capital cities, were shown a list of 23 statements about meat, pork, poultry, fresh or frozen fish, prepared fish products and canned fish and seafood products. They were asked to associate each of the statements with one or more of these protein sources, or none of them. The results are presented in the attached perceptual map, which is generated using a correspondence analysis algorithm (Figure 6.3.1). It should be noted that ten statements do not appear on the map, either because of the relatively high level of “don’t know” or non-response, or because they were found not to contribute significantly to perceptual differentiation between the six protein sources.

In parts of the discussion that follows, the rank of protein sources in respect of the strength of the association to a particular statement is discussed. The ranking is derived from the proportion of respondents who associated the statement with each protein source - it is not drawn from the perceptual map. The perceptual map should be seen merely as a technique with which to highlight strong and very weak associations between statements and protein sources.

Prepared fish products and canned fish and seafood have the weakest perceptions of the six protein sources among the food services sector on almost all the dimensions measured. The exception, as highlighted on the perceptual map, is that **canned fish and seafood** is perceived to take up little storage space. That **canned fish and seafood** and **prepared fish products** are positioned on the map near the attributes “easy to prepare” and “easily available to buy” indicate **relative** strengths only, as these two fish categories still only rank fifth and sixth on these statements, out of the six protein sources investigated.

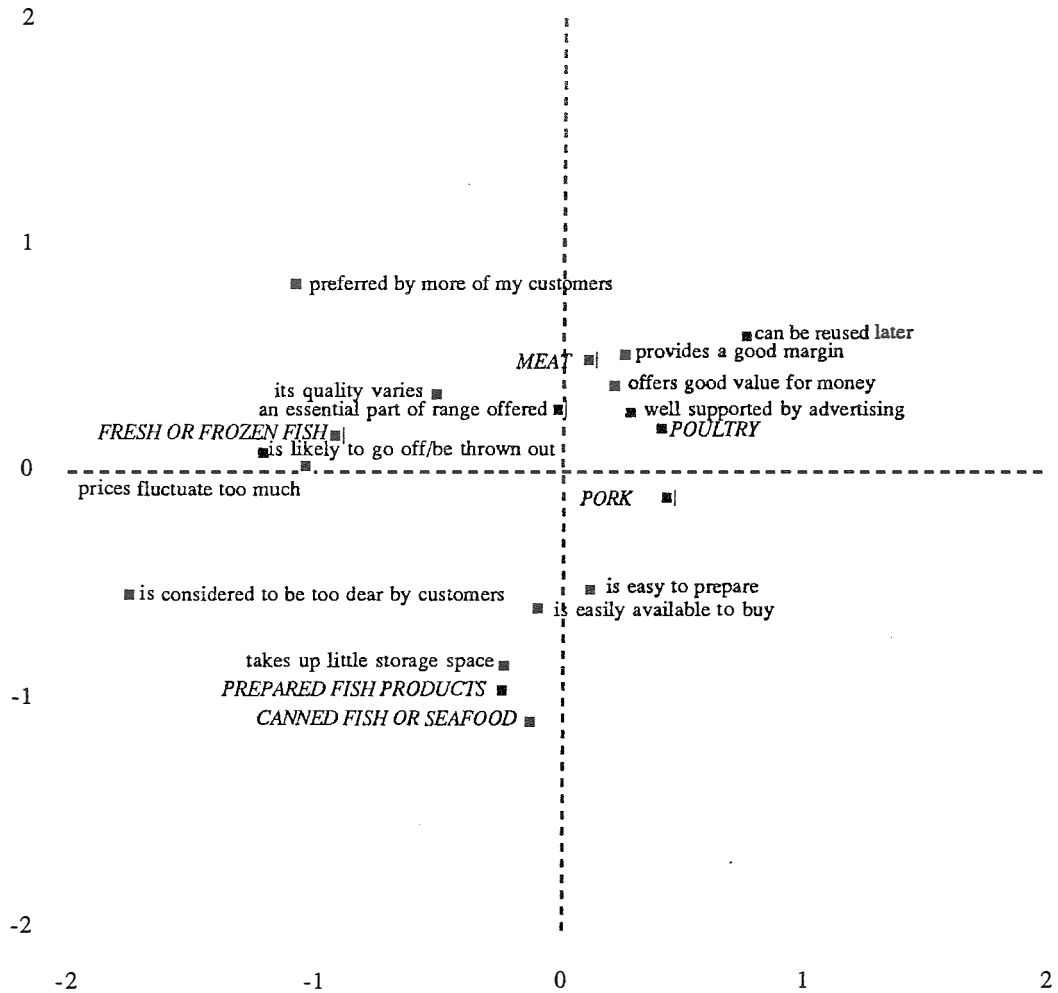
Fresh or frozen fish is seen as having a mixed image among food services operators. It is thought most likely to go off and have to be thrown out, and it is the protein source most likely to be considered too dear by customers. Prices paid for **fresh or frozen fish** are also thought to fluctuate too much relative to the other alternatives. However, it has a good customer franchise, being second to meat in terms of customer preferences. It is also second to meat in terms of being easy to prepare, and being an essential part of the range offered, though its quality is thought to vary. None of the three fish categories are thought to be well supported by advertising or to be easily available to buy, compared with **meat, poultry, or pork**.

Meat has the most positive image of the six protein sources among food services operators. It is considered most easily available to buy; an essential part of the range offered; easy to prepare; to offer the customer good value for money; and to be preferred by more customers than any of the other protein sources investigated. It is the product best supported by advertising, and it can be reused later after it has been cooked initially. Second to poultry, it is thought to provide a good margin to the business. However, **meat** it also associated with a few negative perceptions as well - it is most likely to be perceived as variable in quality; and second to **fresh or frozen fish**, its prices are thought to fluctuate too much. Though nowhere near the negative barrier faced by **fresh or frozen fish**, **meat** is the second most likely protein source to be considered too dear by customers.

Poultry is seen as offering the best margin to the business, no doubt a key factor in its widespread popularity. Second to **meat**, it is thought to be easily available to buy, to offer the customer good value for money, and to be able to be reused later after it has been cooked initially. However, second to **fresh or frozen fish**, it is thought likely to go off and have to be thrown out. It is attractive because, like pork, it is not considered to be too dear by customers, nor to have prices which fluctuate too much. It is thought to be well supported by advertising, though well behind **meat**, and slightly lagging **pork**. With **meat** and **fresh or frozen fish**, it is considered an essential part of the range offered, easy to prepare, and preferred by more of the customers.

Pork does not have a strong image with food service operators, though it is considered to be well supported by advertising (second to **meat**), and with **poultry**, is the least likely of the six protein sources to be considered too dear by customers, or to have prices which fluctuate too much. **Pork** has a stronger perception in the food services sector than either **prepared fish products** or **canned fish or seafood**.

Figure 6.3.1: Perceptual Map of 'Restaurants' Attitudes to Protein Sources



Total retention = 50.3 + 36.5

7. Comparisons with Findings from the 1977 Study

Prior to the National Seafood Consumption Study the most recent detailed national survey was conducted in 1977.

That 1977 study drew conclusions and made recommendations which are relevant to these three Trade/Out-Of-Home Consumption industry segments. The 1977 study concluded that fish and seafood consumption could be increased fairly readily in the absence of two major constraints, ie price and resource availability. The 1977 study observed that "increased consumption of Australian fish requires the fulfilment of one or both of the following objectives:

- to improve the industry's capacity to supply frozen fish to institutional and catering markets, and
- to endeavour to establish fish as an 'everyday' food item in the home."

Recommendations in that study which related directly to catering, 'restaurants', or 'take-away' industry segments included:

- "- industry research by Government and industry to establish the extent of stocks available, especially for take-away outlets and tinned fish. (continues)
- improved co-ordination between catching and distribution sectors in order to improve continuity of supply and achieve some predictability in price to meet the needs of fast food outlets and supermarkets. (continues)
- fish species be identified in a way acceptable to both trade and consumers.
- an industry levy be adopted to promote under-utilised or new species ...(continues)".

Data not covered directly by the scope of this report indicate that substantial progress has been made in pursuing several of these recommendations. The introduction of the Individual Transferable Quota system (ITQ; see “Literature Review”, this Study) is a direct consequence of quantitative estimates of stocks and an approach to sustain them at harvestable levels over the long term. Similarly, the establishment of the FIRDC itself (via Government funding rather than an industry levy) has provided a mechanism for promoting the development of the interests of the fishing industry.

The 1977 study proposed that the fish and seafood needs of the catering trade (including the take-away outlets) could be identified as:

- a relatively cheap product
- continuity of its supply
- quality of produce (consistently high)
- its suitability to use in fast food operations
- its consumer acceptability (boneless, skinless).

Irrespective of the current validity of these proposals, it is relevant that only the ‘restaurants’ trade segment indicated in this study that it was getting what it required from its suppliers. One outcome has been the emergence of mainly imported hake as the primary fish type served at ‘other take-away outlets’ and by caterers, and the second most frequently served species at restaurants.

On the other hand, some instances of strengthening commercial ties between catchers and distributors are apparent (vertical integration of businesses), eg the development of fish retailing complexes at Blackwattle Bay, New South Wales, and Fremantle, Western Australia.

In general the promotion of under-utilised or new species has happened without the direct requirement for an industry levy. For example:

- shark was identified most frequently by ‘take-away’ outlets as their number one fish type, and the market name ‘flake’ (most widely used at the time of the 1977 study) received no mention in this consumption study
- hake and orange roughy have achieved prominent popularity in the catering, ‘restaurants’ and ‘take-away’ industry segments, but were not mentioned in the 1977 study
- squid/calamari has also shown a dramatic growth in popularity, but was scarcely discussed in the 1977 study.

In all these instances, a particular set of market influences have converged in such a way that major promotional campaigns have not been a pre-requisite for acceptance and growth in popularity.

Submitted for
PA Consulting Group

R G Logie-Smith
General Manager -
Process & Extractive Industries

P J Kitson
Consultant

This report has been prepared for the client to whom it is addressed. In accordance with our standard practice, PA, its servants and agents disclaim responsibility to any third party for anything arising out of the report.

Appendix I

Caterers' Questionnaire

YANN CAMPBELL HOARE WHEELER
 MARKET RESEARCH
 11 PRINCES STREET
 ST KILDA VIC 3182
 PHONE: 537 2255

TIME: _____
 START _____
 FINISH: _____

SYDNEY 1
 MELBOURNE 2
 BRISBANE 3
 ADELAIDE 4
 PERTH 5
 HOBART 6

JOB NO.: 675412 CATERERS

FISH AND SEAFOOD CONSUMPTION STUDY
WAVE 2

INTRODUCTION

Thank you for agreeing to participate in the National Food Consumption Study. The information collected from every respondent will be treated in the strictest confidence, added to the other data obtained and used for statistical purposes only. The results will be used in planning the supply and marketing of important Australian food items in the 1990's.

Q.1a First of all would you mind telling me your exact position in this business.

POSITION OF RESPONDENT: _____

Q.1b Are you aware of (or purchase) all meat, fish, seafood and poultry that is bought by this business? IF DOUBT ASK ABOUT THE PURCHASING OF FISH

CONTINUE TO Q.1c _____ YES 1

ASK TO SPEAK TO PERSON RESPONSIBLE FOR THESE ITEMS AND RECOMMENCE INTERVIEW _____ NO 2

Q.1c Are you the only person in this business who is involved in the decision for the purchase of fish and seafood?

YES 1

NO 2

Q.1d SHOW CARD K
 Which of the following statements best describes the majority of the catering conducted by this business? SINGLE RESPONSE ONLY

GO TO Q.1e _____ CONTRACT CATERING ON ANOTHER BUSINESSES PREMISES 1

IN-HOUSE CATERING BY EMPLOYEES OF BUSINESS TO OTHER STAFF MEMBERS 2

GO TO Q.2a _____ SUPPLY OF CATERED FOOD THAT IS PREPARED ON OWN PREMISES AND THEN TAKEN TO CLIENT 3

CATERING OF FOOD WHERE CLIENTS COME TO YOUR PREMISES/BUSINESS 4

Q.1e In the last financial year (1989/90) how many catering contracts were operated (in this State) by this business? (RECORD IN TOTAL) And how many were special event (one off contracts) and how many were continuous over a defined period of time? ENSURE THAT THE TWO FIGURES TOTAL AND IF NONE RECORD AS "0"

SPECIAL EVENT _____

CONTINUOUS CONTRACT _____

TOTAL _____

<u>IF ONLY SPECIAL EVENT CONTRACTS GO TO Q.2a</u>			
Q.1f	What is the general length of a catering contract? SINGLE RESPONSE ONLY	UNDER 1 YEAR	1
		OVER 1 YEAR - 2 YEARS	2
		OVER 2 YEARS - 3 YEARS	3
		OVER 3 YEARS - 4 YEARS	4
		OVER 4 YEARS - 5 YEARS	5
		OVER 5 YEARS	6
		DON'T KNOW/CAN'T SAY	7

Q.1g	And generally which of the following best describes the purchase of products for each contract? READ OUT SINGLE RESPONSE ONLY		
	EACH CONTRACT MANAGER IS FREE TO CHOOSE THE SUPPLIER OF ALL PURCHASED FOOD PRODUCTS		1
	EACH CONTRACT MANAGER PURCHASES FOOD PRODUCTS FROM SUPPLIERS RECOMMENDED BY THE BUSINESS (HEAD OFFICE)		2
	FOOD IS BOUGHT BY THE BUSINESS (HEAD OFFICE) AND EACH CONTRACT MANAGER ORDERS FOOD FROM HEAD OFFICE		3
	FOOD IS ALLOCATED BY HEAD OFFICE TO EACH CONTRACT		4
	OTHER (SPECIFY) _____		5

Q.2a	Which of these two statements best describes the planning for meals in this organisation? READ OUT		
	THE MENU IS PLANNED OUT WELL IN ADVANCE FOR A SPECIFIC PERIOD OF TIME AND IS BASED ON PAST EXPERIENCE		1
	THE MENU IS CONSTANTLY ADJUSTED TO MEET SPECIFIC CUSTOMER REQUIREMENTS		2

SHOW CARD A

Q.2b

In other research, caterers have made a number of statements about the bases for their meals, such as, meat, pork, poultry, fresh or frozen fish, prepared fish products (like fish fingers) and canned fish and seafood products. I am going to read out some statements and would like you to tell me to which, if any, each statement applies. You may nominate none, one, or as many as you like. There are no right or wrong answers, we are just interested in your opinion. ROTATE TO ASTERISK

The first statement is ... (READ OUT FIRST STATEMENT) From Card A to which products does this statement apply?

	<u>MEAT</u>	<u>PORK</u>	<u>POULTRY</u>	<u>FRESH OR FROZEN FISH</u>	<u>PREP -ARED FISH PRODUCTS</u>	<u>CANNED FISH & SEAFOOD</u>	<u>NONE</u>	<u>DON'T KNOW</u>
1. PROVIDES A GOOD MARGIN TO THE BUSINESS	1	2	3	4	5	6	7	8
2. WELL SUPPORTED BY ADVERTISING	1	2	3	4	5	6	7	8
3. SUPPLY OFTEN CANNOT BE GUARANTEED	1	2	3	4	5	6	7	8
4. IS OFTEN TOO EXPENSIVE FOR THE BUSINESS TO BUY	1	2	3	4	5	6	7	8
5. OFFERS THE BUSINESS GOOD VALUE FOR MONEY	1	2	3	4	5	6	7	8
6. IS LIKELY TO GO OFF AND HAVE TO BE THROWN OUT	1	2	3	4	5	6	7	8
7. PRESENTS A PROBLEM IN WASTE DISPOSAL	1	2	3	4	5	6	7	8
8. STAFF DISLIKE PREPARING AND COOKING IT	1	2	3	4	5	6	7	8
9. OUR STAFF DON'T HAVE THE KNOWLEDGE TO PREPARE AND COOK IT	1	2	3	4	5	6	7	8
10. IT TAKES UP LITTLE STORAGE SPACE	1	2	3	4	5	6	7	8
11. IS CONSIDERED TO BE TOO DEAR BY CUSTOMERS	1	2	3	4	5	6	7	8
12. IT IS DIFFICULT TO BUY IN THE RIGHT SIZE PORTIONS FOR PRESENTATION ON PLATES	1	2	3	4	5	6	7	8
13. PREFERRED BY MORE OF MY CUSTOMERS	1	2	3	4	5	6	7	8
14. IT CAN BE REUSED LATER AFTER IT HAS BEEN COOKED INITIALLY	1	2	3	4	5	6	7	8
15. OUR STAFF DON'T HAVE THE KNOWLEDGE TO BUY IT CONFIDENTLY	1	2	3	4	5	6	7	8
16. IS EASILY AVAILABLE TO BUY	1	2	3	4	5	6	7	8
17. IT IS EASY TO PREPARE	1	2	3	4	5	6	7	8
18. SUITS THE MENU WHICH WE OFFER	1	2	3	4	5	6	7	8
19. ITS QUALITY VARIES	1	2	3	4	5	6	7	8
20. PRICES FLUCTUATE TOO MUCH	1	2	3	4	5	6	7	8
21. AN ESSENTIAL PART OF THE RANGE WE OFFER	1	2	3	4	5	6	7	8
22. IS A HEALTHY MEAL	1	2	3	4	5	6	7	8
23. IS A FILLING MEAL	1	2	3	4	5	6	7	8
24. LOOKS GOOD ON THE PLATE	1	2	3	4	5	6	7	8
25. SUITED TO MICROWAVE COOKING	1	2	3	4	5	6	7	8

**ALL THE REMAINING QUESTIONS CONCERN FISH AND SEAFOOD PRODUCTS
AS PART OF THE NATIONAL SEAFOOD CONSUMPTION STUDY**

Q.3a Do you prepare and cook any fish or seafood dishes? GO TO Q.4a _____ YES 1
 GO TO Q.3b _____ NO 2

IF NO
 Q.3b Why don't you offer fish or seafood dishes?

OFFICE

Q.3c Have you ever offered fish or seafood dishes in the past? GO TO Q.4a, Q.4b THEN Q.13a _____ YES 1
 GO TO Q.13a _____ NO 2
 _____ DON'T KNOW 3

Q.4a What do you believe are the main problems in preparing and selling fish and seafood?

NO PROBLEMS/NONE

01

OFFICE

SHOW CARD G

Q.4b Research conducted with other caterers has uncovered a number of problems that suppliers and preparers of fresh and frozen fish and seafood have encountered. Using the following scale (SHOW CARD G), how significant do you consider each of the following problems? READ OUT. ROTATE TO ASTERISK

	<u>VERY</u> <u>SIGNI-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>QUITE</u> <u>SIGNI-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>NOT VERY</u> <u>SIGNI-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>NOT A</u> <u>PROBLEM</u>	<u>DON'T</u> <u>KNOW</u>
1. THE VARIABLE QUALITY OF THE FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
2. THE PROPORTION OF THE FISH AND SEAFOOD PURCHASED WHICH CANNOT BE SOLD AND MUST BE THROWN AWAY	1	2	3	4	5
3. THE COST OF DISPOSING OF WASTE PRODUCT	1	2	3	4	5
4. THE UNAVAILABILITY OF STAFF WITH EXPERIENCE IN PREPARING AND COOKING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
5. THE AMOUNT OF PHYSICAL STORAGE SPACE REQUIRED FOR FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
6. THE NEED TO HAVE SPECIAL COOKING FACILITIES SUCH AS DEEP FRYING UNITS	1	2	3	4	5
7. UNCERTAINTY ABOUT THE FRESHNESS OF FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
8. UNCERTAINTY ABOUT WHETHER THE FISH BOUGHT ARE CORRECTLY NAMED	1	2	3	4	5
9. THE RISK OF BUYING FISH AND SEAFOOD "SIGHT UNSEEN"	1	2	3	4	5
10. CLIENTS DISLIKE BUYING FISH BECAUSE OF THE BONES	1	2	3	4	5
11. UNFAVOURABLE PUBLICITY ABOUT FISH AND SEAFOOD	1	2	3	4	5
12. FISH IS TOO EXPENSIVE TO BUY	1	2	3	4	5
13. SEAFOOD IS TOO EXPENSIVE TO BUY	1	2	3	4	5
14. DIFFICULTY PRE-ORDERING AND RECEIVING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
15. DIFFICULTY OF MAINTAINING THE QUALITY OF FISH AND SEAFOOD PREPARED AND DISTRIBUTED TO DIFFERENT SITES	1	2	3	4	5
16. DIFFICULTY IN OBTAINING GOOD QUALITY PRODUCT	1	2	3	4	5
17. DIFFICULTY GETTING CONTINUOUS SUPPLY AT STEADY PRICES	1	2	3	4	5
18. A LACK OF TRAINING IN FISH HANDLING AND HYGIENE	1	2	3	4	5
19. DIFFICULTY GETTING CONTINUOUS SUPPLY OF A GOOD RANGE OF FISH	1	2	3	4	5

- Q.10a Do you have any purchase contracts for fish and seafood products?
- GO TO Q.10b _____ YES 1
- GO TO Q.11a [_____ NO 2
- _____ DON'T KNOW 3

- Q.10b What is your best estimate of the proportion of fish and seafood products purchased through contracts to the total value of fish and seafood products purchased? VALUE OF CONTRACTS DIVIDED BY TOTAL VALUE OF FISH AND SEAFOOD PURCHASES.

WRITE IN: _____ %

IF 100% IN Q.10b GO TO Q.12; OTHERWISE ASK Q.11a AND Q.11b

SHOW CARD E

Q.11a

VERY IMPORTANT							NOT AT ALL IMPORTANT	DON'T KNOW
1	2	3	4	5	6	7		8

On a scale of 1 to 7 how important are each of the following factors in choosing from which supplier to buy fish or seafood, that is, fresh or frozen that is unpackaged? READ OUT FIRST ROTATED STATEMENT. RECORD BELOW THEN ASK Q.11b FOR THAT STATEMENT. REPEAT Q.11a AND Q.11b FOR EACH STATEMENT.

SHOW CARD F

Q.11b

VERY GOOD/FAVOURABLE							VERY POOR/ UNFAVOURABLE	DON'T KNOW
1	2	3	4	5	6	7		8

On a scale of 1 to 7 how would you rate your main wholesale supplier for ... READ OUT. RECORD BELOW.

	<u>Q.11a</u>	<u>Q.11b</u>
	<u>IMPORT.</u> <u>RATING</u>	<u>WHOLESALE</u> <u>SUPPLIER</u> <u>RATING</u>
1. CLEAN OUTLET	_____	_____
2. IT SELLS FRESH FISH & SEAFOOD (IE. NOT FROZEN)	_____	_____
3. HAS CONSISTENTLY LOW PRICES FOR FISH & SEAFOOD	_____	_____
4. GOOD TEMPERATURE CONTROL	_____	_____
5. OFFERS AUSTRALIAN FISH & SEAFOOD	_____	_____
6. HAS STAFF INFORMED ABOUT FISH & SEAFOOD	_____	_____
7. HAS RELIABLE DELIVERY	_____	_____
8. UNDERSTANDS MY BUSINESS	_____	_____
9. OFFERS A WIDE VARIETY OF FISH & SEAFOOD	_____	_____
10. HAS FRIENDLY STAFF WORKING THERE	_____	_____
11. HAS A GOOD REPUTATION FOR QUALITY FISH & SEAFOOD	_____	_____
12. I CAN BE CONFIDENT THAT FRESH FISH OR SEAFOOD HAS NOT BEEN FROZEN	_____	_____
13. ORDERS ARE PROMPTLY ATTENDED TO	_____	_____
14. GUARANTEE OF THE FISH OR SEAFOOD SOLD BEING CORRECTLY NAMED	_____	_____
15. IT ALSO SELLS A RANGE OF OTHER PRODUCTS I NEED	_____	_____
16. IS HONEST AND FAIR IN DOING BUSINESS	_____	_____
17. GIVES GOOD CREDIT TERMS	_____	_____
18. PROVIDES CLEAR DOCUMENTATION AND PAPERWORK	_____	_____

Q.12a Have you noticed any of the following trends with your customers in the last twelve months? READ OUT

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW/ CAN'T SAY</u>
1. MORE CONCERN ABOUT THE IMPACT OF POLLUTION ON SEAFOOD SAFETY	1	2	3
2. MORE CONCERN ABOUT THEIR GENERAL HEALTH	1	2	3
3. A DESIRE TO EAT LESS FAT & SATURATED OILS	1	2	3
4. PURCHASE OF MORE GRILLED RATHER THAN FRIED FISH	1	2	3
5. LESS SALT ON FOOD	1	2	3
6. AVOIDANCE OF PRODUCTS HIGH IN STARCH	1	2	3
7. MORE CONCERN ABOUT THE ACCURACY OF THE NAME OF THE FISH SOLD	1	2	3
8. EATING MORE FISH THAN MEAT	1	2	3

Q.12b And have you noticed any other trends in food preferences with your customers in the last twelve months? PROBE

NO/NOTHING 01

OFFICE

Q.13a What actions need to be taken for your business to buy more fish and seafood products? PROBE

OFFICE

Q.13b What actions need to be taken by the fishing industry in general for more fish and seafood to be bought by your business?

OFFICE

SHOW CARD L

Q.13c I am going to read out a number of actions that other food preparers have identified to be likely to increase their purchase of fish and seafood products. For each action, how likely is it to lead to an increase in your purchase of fish and seafood products? ROTATE TO ASTERISK.

The first action is ... (READ OUT FIRST ACTION). From Card L how likely is this to increase your purchase of fish and seafood?

	<u>VERY LIKELY</u>	<u>SOMEWHAT LIKELY</u>	<u>NEITHER LIKELY NOR UNLIKELY</u>	<u>SOMEWHAT UNLIKELY</u>	<u>VERY UNLIKELY</u>	<u>DON'T KNOW</u>
1. INFORMATION TO HELP CATERERS IN PREPARING AND COOKING SPECIFIC TYPES OF FISH AND SEAFOOD	1	2	3	4	5	6
2. PORTION CONTROLS TO ENSURE STANDARD SIZE PIECES	1	2	3	4	5	6
3. GUARANTEE OF CONSISTENT SUPPLY	1	2	3	4	5	6
4. GUIDELINES FOR <u>YOUR SUPPLIERS</u> FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
5. GUIDELINES FOR <u>FOOD PREPARERS</u> FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
6. GREATER SUPPLY AND VARIETY OF AUSTRALIAN FISH	1	2	3	4	5	6
7. MORE ADVERTISING SUPPORT FOR FISH AND SEAFOOD	1	2	3	4	5	6
8. MORE RELIABLE DELIVERY	1	2	3	4	5	6
9. PREPARATION OF MORE FISH AND SEAFOOD PRODUCTS IN A READY TO COOK FORM (IE. CRUMBED, SMOKED, PIE, SHASLIK)	1	2	3	4	5	6
10. GREATER QUALITY REGULATION TO MINIMISE FOOD POISONING	1	2	3	4	5	6

Now I would like to talk about specific types of fish and seafood.

SHOW CARD M

Q.14a Listed are various species of fish and seafood which have been identified by the fishing industry as being under utilised. For businesses like this, which types do you consider to have the greatest potential for increased sales? RECORD BELOW

FOR THOSE IDENTIFIED AS HAVING POTENTIAL (Q.14a CODES 1 TO 11) ASK Q.14b

Q.14b And what are the main reasons for believing that the potential lies with (READ OUT EACH TYPE MENTIONED IN Q.14a)?

	<u>Q.14a</u>	<u>Q.14b</u> <u>REASON</u>
<u>WILD SPECIES</u>		
JACK MACKEREL (NOT JUST MACKEREL OR ANY OF THE OTHER TYPES)	01	_____
SQUID (OR CALAMARI)	02	_____
PILCHARDS OR SARDINES (NOT CANNED)	03	_____
AUSTRALIAN HERRING/TOMMY RUFF	04	_____
SILVER TREVALLY/SKIPPY (NOT JUST TREVALLY)	05	_____
<u>"FARMED" SPECIES</u>		
FARM PRAWNS (NOT JUST PRAWNS)	06	_____
RAINBOW TROUT (FRESHWATER)	07	_____
ATLANTIC SALMON (FRESH NOT SMOKED)	08	_____
MUSSELS	09	_____
OYSTERS	10	_____
FARM BARRAMUNDI	11	_____
NONE	12] GO TO Q.15a
DON'T KNOW	13	

Q.15a Thinking in the next five years, do you consider that the purchase of fish and seafood products will increase, decrease or remain the same in this business?

INCREASE	1
DECREASE	2
REMAIN THE SAME	3
DON'T KNOW	4

Q.15b And why do you say that?

	OFFICE

CLASSIFICATION

For classification purposes only could you please tell me

Q.16a What is the average weekly non-liquor turnover (sales) of this business? WRITE IN \$ _____

Q.16b And what proportion or sales value of this would be accounted for by all fish and seafood products? PROBE FOR BEST ESTIMATE.

PROPORTION _____% VALUE \$ _____ DON'T KNOW 9999

Q.16c And of the total weekly sales of fish and seafood dishes, approximately what proportion would be made from fresh and frozen fish/seafood, canned fish or seafood and other forms of fish or seafood (bottled, prepackaged etc).

- 1. FRESH/FROZEN _____ %
- 2. CANNED _____ %
- 3. OTHER _____ %

- TOTAL _____ 100%

Q.17 How many full time and part time/casual workers are employed by this business? FULL TIME: _____
PART TIME/CASUAL: _____

THANK YOU VERY MUCH FOR YOUR HELP AS I SAID, I AM FROM YANN CAMPBELL HOARE WHEELER MARKET RESEARCH. IF YOU WISH I WILL GIVE YOU OUR TELEPHONE NUMBER IF YOU WOULD LIKE TO CHECK ANYTHING. IF YOU WOULD LIKE TO CHECK THE BONA FIDES OF THIS COMPANY, PLEASE CALL THE MARKET RESEARCH LINE ON 008 023642 AND GIVE THE COMPANY NAME: YANN CAMPBELL HOARE WHEELER. CALLS TO THIS NUMBER ARE FREE.

COMPANY NAME: _____

RESPONDENT NAME: _____

ADDRESS: _____

SUBURB: _____ PHONE: _____

I hereby certify that this is a true, accurate and complete interview.

SIGNED: (Interviewer)

DATE:

Appendix II

'Restaurants' Questionnaire

YANN CAMPBELL HOARE WHEELER
 MARKET RESEARCH
 11 PRINCES STREET
 ST KILDA VIC 3182
 PHONE: 537 2255

TIME:
 START _____
 FINISH: _____

SYDNEY 1
 MELBOURNE 2
 BRISBANE 3
 ADELAIDE 4
 PERTH 5
 HOBART 6

RESTAURANT 1
 CLUB (SOCIAL)/SPORTING 2
 HOTEL 3
 MOTEL 4

FISH & SEAFOOD CONSUMPTION STUDY
WAVE 2

JOB NO.: 6754F2:

INTRODUCTION

Thank you for agreeing to participate in the National Food Consumption Study. The information collected from every respondent will be treated in the strictest confidence, added to the other data obtained and used for statistical purposes only. The results will be used in planning the supply and marketing of important Australian food items in the 1990's.

Q.1a First of all would you mind telling me your exact position in this business.

POSITION OF RESPONDENT: _____

Q.1b Are you yourself, responsible for the purchase of the meat, fish, seafood and poultry that is bought by this business? IF DOUBT ASK ABOUT THE PURCHASING OF FISH

CONTINUE TO Q.1c _____ YES 1
 ASK TO SPEAK _____ NO 2
 TO PERSON RESPONSIBLE FOR THESE ITEMS AND RECOMMENCE INTERVIEW

TERMINATE - ALL CONTRACT CATERED (SPECIFY) _____ NO 3

Q.1c Are you responsible for purchasing these items for this business only, or for other outlets as well?

GO TO Q.1e _____ ONE BUSINESS ONLY 1
 GO TO Q.1d _____ OTHER OUTLETS 2

Q.1d And how many outlets do you purchase meat, fish, seafood and poultry for? IF RESPONDENT INDICATES A DIFFERENT NUMBER OF OUTLETS FOR EACH PRODUCT ASK: How many outlets do you purchase fish and seafood for?

TWO 2
 THREE 3
 FOUR 4
 FIVE 5
 SIX OR MORE (WRITE IN) _____

Q.1e Is this business part of a buying group for meat, fish and seafood or poultry products?

YES - ALL 1
 YES - ONLY FISH/SEAFOOD 2
 NOT FISH/SEAFOOD/NO 3

SHOW CARD A

- Q.2 In other research other caterers have made a number of statements about the bases for their meals, such as meat, pork, poultry, fresh or frozen fish, prepared fish products (like fish fingers) and canned fish and seafood products. I am going to read out each statement and would like you to tell me to which, if any, each statement applies. You may nominate none, one, or as many as you like. There are no right or wrong answers, we are just interested in your opinion. ROTATE TO ASTERISK

The first statement is ... (READ OUT FIRST STATEMENT). From Card A to which products does this statement apply?

	<u>MEAT</u>	<u>PORK</u>	<u>POULTRY</u>	<u>FRESH OR FROZEN FISH</u>	<u>PREP -ARED FISH PRODUCTS</u>	<u>CANNED FISH & SEAFOOD</u>	<u>NONE</u>	<u>DON'T KNOW</u>
1. PROVIDES A GOOD MARGIN TO THE BUSINESS	1	2	3	4	5	6	7	8
2. WELL SUPPORTED BY ADVERTISING	1	2	3	4	5	6	7	8
3. SUPPLY OFTEN CANNOT BE GUARANTEED	1	2	3	4	5	6	7	8
4. IS OFTEN TOO EXPENSIVE FOR THE BUSINESS TO BUY	1	2	3	4	5	6	7	8
5. OFFERS THE CUSTOMER GOOD VALUE FOR MONEY	1	2	3	4	5	6	7	8
6. IS LIKELY TO GO OFF AND HAVE TO BE THROWN OUT	1	2	3	4	5	6	7	8
7. PRESENTS A PROBLEM IN WASTE DISPOSAL	1	2	3	4	5	6	7	8
8. STAFF DISLIKE PREPARING AND COOKING IT	1	2	3	4	5	6	7	8
9. OUR STAFF DON'T HAVE THE KNOWLEDGE TO PREPARE AND COOK IT	1	2	3	4	5	6	7	8
10. IT TAKES UP LITTLE STORAGE SPACE	1	2	3	4	5	6	7	8
11. IS CONSIDERED TO BE TOO DEAR BY CUSTOMERS	1	2	3	4	5	6	7	8
12. IT IS DIFFICULT TO BUY IN THE RIGHT SIZE PORTIONS FOR PRESENTATION ON PLATES	1	2	3	4	5	6	7	8
13. PREFERRED BY MORE OF MY CUSTOMERS	1	2	3	4	5	6	7	8
14. IT CAN BE REUSED LATER AFTER IT HAS BEEN COOKED INITIALLY	1	2	3	4	5	6	7	8
15. OUR STAFF DON'T HAVE THE KNOWLEDGE TO BUY IT CONFIDENTLY	1	2	3	4	5	6	7	8
16. IS EASILY AVAILABLE TO BUY	1	2	3	4	5	6	7	8
17. IT IS EASY TO PREPARE	1	2	3	4	5	6	7	8
18. SUITS THE MENU WHICH WE OFFER	1	2	3	4	5	6	7	8
19. ITS QUALITY VARIES	1	2	3	4	5	6	7	8
20. PRICES FLUCTUATE TOO MUCH	1	2	3	4	5	6	7	8
21. AN ESSENTIAL PART OF THE RANGE WE OFFER	1	2	3	4	5	6	7	8
22. LOOKS GOOD ON THE PLATE	1	2	3	4	5	6	7	8
23. SUITED TO MICROWAVE COOKING	1	2	3	4	5	6	7	8

**ALL THE REMAINING QUESTIONS CONCERN FISH AND SEAFOOD PRODUCTS
AS PART OF THE NATIONAL SEAFOOD CONSUMPTION STUDY**

Q.3a Does this restaurant/club/hotel/motel currently offer fish or seafood dishes? GO TO Q.4a _____ YES 1
 GO TO Q.3b _____ NO 2

IF NO
 Q.3b Why don't you offer fish or seafood dishes?

OFFICE

Q.3c Have you ever offered fish or seafood dishes in the past? GO TO Q.4a, Q.4b THEN Q.13a _____ YES 1
 GO TO Q.13a _____ NO 2
 _____ DON'T KNOW 3

Q.4a What do you believe are the main problems in preparing and selling fish and seafood? PROBE

NO PROBLEMS/NONE 01

OFFICE

SHOW CARD G

Q.4b

Research conducted with other caterers has uncovered a number of problems that suppliers and preparers of fresh and frozen fish and seafood have encountered. Using the following scale (SHOW CARD G), how significant do you consider each of the following problems? READ OUT. ROTATE TO ASTERISK.

	<u>VERY</u> <u>SIGNI-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>QUITE</u> <u>SIGNI-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>NOT VERY</u> <u>SIGNI-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>NOT A</u> <u>PROBLEM</u>	<u>DON'T</u> <u>KNOW</u>
1. THE VARIABLE QUALITY OF THE FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
2. THE PROPORTION OF THE FISH AND SEAFOOD PURCHASED WHICH CANNOT BE SOLD AND MUST BE THROWN AWAY	1	2	3	4	5
3. THE COST OF DISPOSING OF WASTE PRODUCT	1	2	3	4	5
4. THE UNAVAILABILITY OF STAFF WITH EXPERIENCE IN PREPARING AND COOKING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
5. THE AMOUNT OF PHYSICAL STORAGE SPACE REQUIRED FOR FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
6. THE LACK OF KNOWLEDGE OF CUSTOMERS ABOUT THE VARIETY OF FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
7. UNCERTAINTY ABOUT THE FRESHNESS OF FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
8. UNCERTAINTY ABOUT WHETHER THE FISH BOUGHT ARE CORRECTLY NAMED	1	2	3	4	5
9. THE RISK OF BUYING FISH AND SEAFOOD "SIGHT UNSEEN"	1	2	3	4	5
10. UNFAVOURABLE PUBLICITY ABOUT FISH & SEAFOOD	1	2	3	4	5
11. CUSTOMERS DISLIKE BUYING FISH BECAUSE OF THE BONES	1	2	3	4	5
12. THE NEED TO HAVE SPECIAL COOKING FACILITIES SUCH AS DEEP FRYING UNITS	1	2	3	4	5
13. FISH IS TOO EXPENSIVE TO BUY	1	2	3	4	5
14. SEAFOOD IS TOO EXPENSIVE TO BUY	1	2	3	4	5
15. DIFFICULTY PRE-ORDERING AND RECEIVING FISH & SEAFOOD PRODUCTS	1	2	3	4	5
16. DIFFICULTY IN OBTAINING GOOD QUALITY PRODUCT	1	2	3	4	5
17. DIFFICULTY GETTING CONTINUOUS SUPPLY AT STEADY PRICES	1	2	3	4	5
18. A LACK OF TRAINING IN FISH HANDLING AND HYGIENE	1	2	3	4	5
19. DIFFICULTY GETTING CONTINUOUS SUPPLY OF A GOOD RANGE OF FISH	1	2	3	4	5

SHOW CARD E

Q.11 I would now like you to think about what your customers look for in an outlet which sells cooked fish and seafood. Again on a scale of 1 to 7, how important do you believe each of the following factors are to your customers when they choose where to buy cooked fish and seafood. READ OUT ROTATING TO ASTERISK. RECORD BELOW

Q.11

- | | | |
|----|---|-------|
| 1. | CLEAN PREMISES | _____ |
| 2. | FRESH RATHER THAN FROZEN FISH OR SEAFOOD IS USED | _____ |
| 3. | HAS A REPUTATION FOR QUALITY FISH OR SEAFOOD | _____ |
| 4. | HAS CONSISTENTLY LOW PRICES FOR FISH AND SEAFOOD. | _____ |
| 5. | OFFERS AUSTRALIAN FISH AND SEAFOOD | _____ |
| 6. | HAS INFORMED STAFF ABOUT FISH AND SEAFOOD MEALS | _____ |
| 7. | OFFERS A WIDE VARIETY OF FISH AND SEAFOOD MEALS | _____ |
| 8. | THE CUSTOMER CAN BE SURE THAT FISH OR SEAFOOD SOLD AS FRESH HAS NOT BEEN FROZEN | _____ |

Q.12a Have you noticed any of the following trends with your customers in the last twelve months? READ OUT

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW/ CAN'T SAY</u>
1. MORE CONCERN ABOUT THE IMPACT OF POLLUTION ON SEAFOOD SAFETY	1	2	3
2. MORE CONCERN ABOUT THEIR GENERAL HEALTH	1	2	3
3. A DESIRE TO EAT LESS FAT & SATURATED OILS	1	2	3
4. PURCHASE OF MORE GRILLED RATHER THAN FRIED FISH	1	2	3
5. LESS SALT ON FOOD	1	2	3
6. AVOIDANCE OF PRODUCTS HIGH IN STARCH	1	2	3
7. MORE CONCERN ABOUT THE ACCURACY OF THE NAME OF THE FISH SOLD	1	2	3
8. EATING MORE FISH THAN MEAT	1	2	3

Q.12b And have you noticed any other trends in food preferences with your customers in the last twelve months? PROBE.

NO/NOTHING 01

	OFFICE

Q.13a What actions need to be taken for your business to stock and sell more fish and seafood products? PROBE

OFFICE

Q.13b What actions need to be taken by the fish industry in general for more fish and seafood to be sold by your business?

OFFICE

SHOW CARD L

Q.14

I am going to read out a number of actions that other food preparers have identified to be likely to increase their purchase of fish and seafood products. For each action, how likely is it to lead to an increase in your purchase of fish and seafood products? ROTATE TO ASTERISK.

The first action is ... (READ OUT FIRST ACTION). From Card L how likely is this to increase your purchase of fish and seafood.

	<u>VERY LIKELY</u>	<u>SOMEWHAT LIKELY</u>	<u>NEITHER LIKELY NOR UNLIKELY</u>	<u>SOMEWHAT UNLIKELY</u>	<u>VERY UNLIKELY</u>	<u>DON'T KNOW</u>
1. INFORMATION TO HELP CATERERS IN PREPARING AND COOKING SPECIFIC TYPES OF FISH AND SEAFOOD	1	2	3	4	5	6
2. PORTION CONTROLS TO ENSURE STANDARD SIZE PIECES	1	2	3	4	5	6
3. GUARANTEE OF CONSISTENT SUPPLY	1	2	3	4	5	6
4. GUIDELINES FOR <u>YOUR SUPPLIERS</u> FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
5. GUIDELINES FOR <u>FOOD PREPARERS</u> FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
6. GREATER SUPPLY AND VARIETY OF AUSTRALIAN FISH	1	2	3	4	5	6
7. MORE ADVERTISING SUPPORT FOR FISH AND SEAFOOD	1	2	3	4	5	6
8. MORE RELIABLE DELIVERY	1	2	3	4	5	6
9. PREPARATION OF MORE FISH & SEAFOOD PRODUCTS IN A READY TO COOK FORM (IE. CRUMBED, SMOKED, PIE, SHASLIK)	1	2	3	4	5	6
10. GREATER QUALITY REGULATION TO MINIMISE FOOD POISONING	1	2	3	4	5	6

Now I would like to talk about specific types of fish and seafood.

SHOW CARD M

Q.15a Listed are various species of fish and seafood which have been identified by the fishing industry as being under utilised. For businesses like this, which types do you consider to have the greatest potential for increased sales? RECORD BELOW

FOR THOSE IDENTIFIED AS HAVING POTENTIAL (Q.15a CODES 1 TO 11) ASK Q.15b

Q.15b And what are the main reasons for believing that the potential lies with (READ OUT EACH TYPE MENTIONED IN Q.15a)?

Q.15a	Q.15b REASON
<u>WILD SPECIES</u>	
JACK MACKEREL (NOT JUST MACKEREL OR ANY OF THE OTHER TYPES) 01	_____
SQUID (OR CALAMARI) 02	_____
PILCHARDS OR SARDINES (NOT CANNED) 03	_____
AUSTRALIAN HERRING/ TOMMY RUFF 04	_____
SILVER TREVALLY/SKIPPY (NOT JUST TREVALLY) 05	_____
<u>"FARMED" SPECIES</u>	
FARM PRAWNS (NOT JUST PRAWNS) 06	_____
RAINBOW TROUT (FRESHWATER) 07	_____
ATLANTIC SALMON (FRESH NOT SMOKED) 08	_____
MUSSELS 09	_____
OYSTERS 10	_____
FARM BARRAMUNDI 11	_____
NONE 12	} GO TO Q.16a
DON'T KNOW 13	

Q.16a Thinking in the next five years, do you consider that the sale of fish and seafood products will increase, decrease or remain the same in this business?

INCREASE	1
DECREASE	2
REMAIN THE SAME	3
DON'T KNOW	4

Q.16b And why do you say that?

	OFFICE

CLASSIFICATION

For classification purposes only could you please tell me

Q.20a The average weekly non-liquor turnover (sales) of this business? WRITE IN \$ _____

Q.20b And what proportion or sales value of this would be accounted for by all fish and seafood dishes. Again exclude liquor and other drinks? PROBE FOR BEST ESTIMATE.

PROPORTION _____% VALUE \$ _____ DON'T KNOW 9999

Q.20c And of the total weekly sales of fish and seafood dishes, approximately what proportion would be made from fresh & frozen fish/seafood, canned fish or seafood and other forms of fish or seafood (bottled, prepackaged, etc.)

1.	FRESH/FROZEN	_____ %
2.	CANNED	_____ %
3.	OTHER	_____ %
	TOTAL:	_____ %
		100%

Q.21 How many full time and part time/casual workers are employed by this business? FULL TIME: _____
PART TIME/CASUAL: _____

Q.22 Does this business have any ownership ties with ... READ OUT? RECORD BELOW

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
FISH AND SEAFOOD WHOLESALER	1	2	3
FISH AND SEAFOOD PROCESSOR	1	2	3
FISH AND SEAFOOD RETAILER (IE. UNCOOKED)	1	2	3
ANOTHER RETAILER SELLING COOKED FISH AND SEAFOOD	1	2	3

CRITICAL THAT THE FOLLOWING QUESTIONS ARE COMPLETED FOR APPROPRIATE BUSINESS (SEE FRONT PAGE)

Q.23 RESTAURANT/CLUB (CODE 1 OR 2):
How many people can this restaurant/bistro seat at capacity? WRITE IN: _____

Q.24 HOTEL (CODE 3):
What is your annual licence fee? PROBE FOR BEST ESTIMATE WRITE IN \$ _____

Q.25 MOTEL (CODE 4):
How many motel rooms are available for booking? WRITE IN: _____

INTERVIEWER: OBTAIN A COPY OF THE FULL MENU, IF POSSIBLE, AND ATTACH IT TO THIS QUESTIONNAIRE

THANK YOU VERY MUCH FOR YOUR HELP AS I SAID, I AM FROM YANN CAMPBELL HOARE WHEELER MARKET RESEARCH. I WILL GIVE YOU OUR TELEPHONE NUMBER IF YOU WOULD LIKE TO CHECK THE BONA FIDES OF THIS COMPANY. PLEASE CALL THE COMPANY NUMBER - 537 2255.

COMPANY NAME: _____

RESPONDENT NAME: _____

ADDRESS: _____

SUBURB: _____ PHONE: _____

I certify this is a true, accurate and complete interview, conducted to the best of my ability and in accordance with my instructions. I also agree to hold in confidence and not disclose to any other person the content of this questionnaire or any other information relating to this project.

INTERVIEWER SIGNATURE:

DATE:

INTERVIEWER NO.:

Appendix III

'Take-Aways' Questionnaire

YANN CAMPBELL HOARE WHEELER
 MARKET RESEARCH
 11 PRINCES STREET
 ST KILDA VIC 3182
 PHONE: 537 2255

TIME:
 START _____
 FINISH _____

SYDNEY 1
 MELBOURNE 2
 BRISBANE 3
 ADELAIDE 4
 PERTH 5
 HOBART 6

FISH & CHIP SHOP 1
 OTHER TAKE-AWAY OUTLET 2

JOB NO.: 6754E2

FISH & SEAFOOD CONSUMPTION STUDY
WAVE 2

INTRODUCTION

Thank you for agreeing to participate in the National Fish and Seafood Consumption Study. The information collected from every respondent will be treated in the strictest confidence, added to the other data obtained and used for statistical purposes only. The results will be used in planning the supply and marketing of fish and seafood in the 1990's.

Q.1a First of all would you mind telling me your exact position in this business.

POSITION OF RESPONDENT: _____

Q.1b Are you yourself, responsible for the purchase of fish and seafood that is bought by this business? IF DOUBT ASK ABOUT THE PURCHASING OF FISH

CONTINUE TO Q.1c _____ YES 1
 ASK TO SPEAK _____ NO 2
 TO PERSON RESPONSIBLE FOR THESE ITEMS AND RECOMMENCE INTERVIEW

Q.1c Are you responsible for purchasing these items for this store only, or for other outlets as well?

GO TO Q.1e _____ ONE STORE ONLY 1
 GO TO Q.1d _____ OTHER OUTLETS 2

Q.1d And how many outlets do you purchase fish and seafood for?

TWO 2
 THREE 3
 FOUR 4
 FIVE 5
 SIX OR MORE (WRITE IN) _____

Q.1e Is this store part of a buying group for fish and seafood products?

YES 1
 NO 2

Q.2 What do you believe are the main problems in preparing and selling fish and seafood? PROBE

NO PROBLEMS/NONE 01

OFFICE

SHOW CARD G

Q.3 Research conducted with other fish retailers has uncovered a number of problems that retailers of fresh, frozen and cooked fish and seafood have encountered. Using the following scale (SHOW CARD G), how significant do you consider each of the following problems? READ OUT. ROTATE TO ASTERISK.

	<u>VERY</u> <u>SIGN-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>QUITE</u> <u>SIGN-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>NOT VERY</u> <u>SIGN-</u> <u>FICANT</u> <u>PROBLEM</u>	<u>NOT A</u> <u>PROBLEM</u>	<u>DON'T</u> <u>KNOW</u>
X1. THE VARIABLE QUALITY OF THE FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
2. THE PROPORTION OF THE FISH AND SEAFOOD PURCHASED WHICH CANNOT BE SOLD AND MUST BE THROWN AWAY	1	2	3	4	5
3. THE COST OF DISPOSING OF WASTE PRODUCT	1	2	3	4	5
4. THE UNAVAILABILITY OF STAFF WITH EXPERIENCE IN HANDLING AND SELLING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
5. THE AMOUNT OF PHYSICAL STORAGE SPACE REQUIRED FOR FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
6. THE LACK OF KNOWLEDGE OF CUSTOMERS IN PREPARING AND COOKING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
7. UNCERTAINTY ABOUT THE FRESHNESS OF FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
8. UNCERTAINTY ABOUT WHETHER THE FISH BOUGHT ARE CORRECTLY NAMED	1	2	3	4	5
9. THE DIFFICULTY OF SELLING FISH AND SEAFOOD IF IT IS LABELLED FROZEN	1	2	3	4	5
10. THE RISK OF BUYING FISH AND SEAFOOD "SIGHT UNSEEN"	1	2	3	4	5
11. UNFAVOURABLE PUBLICITY ABOUT FISH & SEAFOOD	1	2	3	4	5
12. CUSTOMERS DISLIKE BUYING FISH BECAUSE OF THE BONES	1	2	3	4	5
13. FISH IS TOO EXPENSIVE TO BUY	1	2	3	4	5
14. SEAFOOD IS TOO EXPENSIVE TO BUY	1	2	3	4	5
15. DIFFICULTY PRE-ORDERING AND RECEIVING FISH & SEAFOOD PRODUCTS	1	2	3	4	5
16. THE LOW MARGINS NECESSARY TO REMAIN COMPETITIVE	1	2	3	4	5
17. THE STOCK LEVELS THAT NEED TO BE HELD	1	2	3	4	5
18. DIFFICULTY IN OBTAINING GOOD QUALITY PRODUCT	1	2	3	4	5
19. DIFFICULTY GETTING CONTINUOUS SUPPLY AT STEADY PRICES	1	2	3	4	5
20. A LACK OF TRAINING IN FISH HANDLING AND HYGIENE	1	2	3	4	5
21. DIFFICULTY GETTING CONTINUOUS SUPPLY OF A GOOD RANGE OF FISH	1	2	3	4	5

Q.9a SHOW CARD E
 VERY IMPORTANT NOT AT ALL IMPORTANT DON'T KNOW
 1 2 3 4 5 6 7 8

On a scale of 1 to 7 how important are each of the following factors in choosing from which supplier to buy loose fish or seafood, that is, fresh or frozen that is sold unpackaged? READ OUT FIRST ROTATED STATEMENT. RECORD BELOW THEN ASK Q.9b FOR THAT STATEMENT. REPEAT Q.9a AND Q.9b FOR EACH STATEMENT.

Q.9b SHOW CARD F
 VERY GOOD/ FAVOURABLE VERY POOR/ UNFAVOURABLE DON'T KNOW
 1 2 3 4 5 6 7 8

On a scale of 1 to 7 how would you rate your main wholesale supplier for ... READ OUT. RECORD BELOW.

	<u>Q.9a</u> <u>IMPORT. RATING</u>	<u>Q.9b</u> <u>WHOLESALE SUPPLIER RATING</u>
1. CLEAN OUTLET	_____	_____
2. IT SELLS FRESH FISH & SEAFOOD (IE. NOT FROZEN)	_____	_____
3. HAS CONSISTENTLY LOW PRICES FOR FISH & SEAFOOD	_____	_____
4. GOOD TEMPERATURE CONTROL	_____	_____
X 5. OFFERS AUSTRALIAN FISH & SEAFOOD	_____	_____
6. HAS STAFF INFORMED ABOUT FISH & SEAFOOD	_____	_____
7. HAS RELIABLE DELIVERY	_____	_____
8. UNDERSTANDS MY BUSINESS	_____	_____
9. OFFERS A WIDE VARIETY OF FISH & SEAFOOD	_____	_____
10. HAS FRIENDLY STAFF WORKING THERE	_____	_____
11. HAS A GOOD REPUTATION FOR QUALITY FISH & SEAFOOD	_____	_____
12. I CAN BE CONFIDENT THAT FRESH FISH OR SEAFOOD HAS NOT BEEN FROZEN	_____	_____
13. ORDERS ARE PROMPTLY ATTENDED TO	_____	_____
14. GUARANTEE OF THE FISH OR SEAFOOD SOLD BEING CORRECTLY NAMED	_____	_____
15. IS HONEST AND FAIR IN DOING BUSINESS	_____	_____
16. GIVES GOOD CREDIT TERMS	_____	_____
17. PROVIDES CLEAR DOCUMENTATION AND PAPERWORK	_____	_____

Q.10a Do you sell any uncooked fish and seafood products? GO TO Q.10b YES 1
 NO 2
 GO TO Q.10c DON'T KNOW 3

Q.10b What are the main types of uncooked fish and seafood sold?

OFFICE

SHOW CARD E
VERY IMPORTANT

NOT AT ALL IMPORTANT

DON'T KNOW

- 1 2 3 4 5 6 7 8

We have just discussed what you consider important when you buy fresh or frozen fish or seafood for your store. I would now like you to think about what you believe your customers look for in a store which sells fresh or frozen fish or seafood. Again on a scale of 1 to 7, how important do you believe each of the following factors are to your customers when they choose from which outlet to buy fresh or frozen, fish or seafood? READ OUT ROTATING TO ASTERISK. RECORD BELOW.

Q.10b

- 1. CLEAN OUTLET/STORE _____
- 2. THE OUTLET SELLS FRESH FISH AND SEAFOOD (IE. NOT FROZEN) _____
- 3. HAS ATTRACTIVELY DISPLAYED FISH AND SEAFOOD _____
- 4. HAS CONSISTENTLY LOW PRICES FOR FISH AND SEAFOOD _____
- 5. IS AN OUTLET FREQUENTLY SHOPPED AT _____
- X 6. OFFERS AUSTRALIAN FISH AND SEAFOOD _____
- 7. OFFERS FISH AND SEAFOOD SPECIALS _____
- 8. HAS STAFF INFORMED ABOUT FISH AND SEAFOOD _____
- 9. IS EASILY ACCESSIBLE TO THE CUSTOMER _____
- 10. OFFERS ADVERTISED SPECIALS REGULARLY _____
- 11. OFFERS A WIDE VARIETY OF FISH AND SEAFOOD PRODUCTS _____
- 12. HAS FRIENDLY STAFF WORKING THERE _____
- 13. HAS A GOOD REPUTATION FOR QUALITY FISH AND SEAFOOD _____
- 14. THE CUSTOMER CAN BE CONFIDENT THAT FISH OR SEAFOOD SOLD AS FRESH HAS NOT BEEN FROZEN _____

SHOW CARD E

Q.10c I would now like you to think about what your customers look for in an outlet which sells cooked fish and seafood. Again on a scale of 1 to 7, how important do you believe each of the following factors are to your customers when they choose where to buy cooked fish and seafood. READ OUT ROTATING TO ASTERISK. RECORD BELOW

Q.10c

- 1. CLEAN PREMISES _____
- 2. FRESH RATHER THAN FROZEN FISH OR SEAFOOD IS USED _____
- 3. HAS A REPUTATION FOR QUALITY FISH OR SEAFOOD _____
- 4. HAS CONSISTENTLY LOW PRICES FOR FISH AND SEAFOOD _____

- 5. OFFERS AUSTRALIAN FISH AND SEAFOOD _____
- x 6. HAS INFORMED STAFF ABOUT FISH AND SEAFOOD MEALS _____
- 7. OFFERS A WIDE VARIETY OF FISH AND SEAFOOD MEALS _____
- 8. THE CUSTOMER CAN BE SURE THAT FISH OR SEAFOOD SOLD AS FRESH HAS NOT BEEN FROZEN _____

Q.11a Have you noticed any of the following trends with your customers in the last twelve months? READ OUT

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW/ CAN'T SAY</u>
MORE CONCERN ABOUT THE IMPACT OF POLLUTION ON SEAFOOD SAFETY	1	2	3
PURCHASE OF MORE GRILLED RATHER THAN FRIED FISH	1	2	3
LESS SALT ON FOOD	1	2	3
MORE CONCERN ABOUT THE ACCURACY OF THE NAME OF THE FISH SOLD	1	2	3

Q.11b And have you noticed any other trends in food preferences with your customers in the last twelve months? PROBE

NO/NOTHING 01
OFFICE

Q.12a What actions need to be taken for your store to stock and sell more fish and seafood products? PROBE

OFFICE

Q.12b What actions need to be taken by the fishing industry in general for more fish and seafood to be sold by your store?

OFFICE

SHOW CARD L

Q.13 I am going to read out a number of actions that other food preparers have identified to be likely to increase their purchase of fish and seafood products. For each action, how likely is it to lead to an increase in your purchase of fish and seafood products? ROTATE TO ASTERISK.

The first action is ... (READ OUT FIRST ACTION). From Card L how likely is this to increase your purchase of fish and seafood.

	<u>VERY LIKELY</u>	<u>SOMEWHAT LIKELY</u>	<u>NEITHER LIKELY NOR UNLIKELY</u>	<u>SOMEWHAT UNLIKELY</u>	<u>VERY UNLIKELY</u>	<u>DONT KNOW</u>
1. INFORMATION TO HELP IN PREPARING AND COOKING SPECIFIC TYPES OF FISH AND SEAFOOD	1	2	3	4	5	6
2. PORTION CONTROLS TO ENSURE STANDARD SIZE PIECES	1	2	3	4	5	6
3. GUARANTEE OF CONSISTENT SUPPLY	1	2	3	4	5	6
4. GUIDELINES FOR <u>YOUR SUPPLIERS</u> FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
5. GUIDELINES FOR <u>FOOD PREPARERS</u> FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
6. GREATER SUPPLY AND VARIETY OF AUSTRALIAN FISH	1	2	3	4	5	6
7. MORE ADVERTISING SUPPORT FOR FISH AND SEAFOOD	1	2	3	4	5	6
8. MORE RELIABLE DELIVERY	1	2	3	4	5	6
9. PREPARATION OF MORE FISH AND SEAFOOD PRODUCTS IN A READY TO COOK FORM (IE. CRUMBED, SMOKED, PIE, SHASLIK)	1	2	3	4	5	6
10. GREATER QUALITY REGULATION TO MINIMISE FOOD POISONING	1	2	3	4	5	6

Now I would like to talk about specific types of fish and seafood.

SHOW CARD M

Q.14a Listed are various species of fish and seafood which have been identified by the fishing industry as being under utilised. For businesses like this, which types do you consider to have the greatest potential for increased sales? RECORD BELOW

Q.14b FOR THOSE IDENTIFIED AS HAVING POTENTIAL (Q.14a CODES 1 TO 11) ASK Q.14b
And what are the main reasons for believing that the potential lies with (READ OUT EACH TYPE MENTIONED IN Q.14a)?

Q.14a	Q.14b REASON
<u>WILD SPECIES</u>	
JACK MACKEREL (NOT JUST MACKEREL OR ANY OF THE OTHER TYPES) 01	_____
SQUID (OR CALAMARI) 02	_____
PILCHARDS OR SARDINES (NOT CANNED) 03	_____
AUSTRALIAN HERRING/ TOMMY RUFF 04	_____
SILVER TREVALLY/SKIPPY (NOT JUST TREVALLY) 05	_____
<u>"FARMED" SPECIES</u>	
FARM PRAWNS (NOT JUST PRAWNS) 06	_____
RAINBOW TROUT (FRESHWATER) 07	_____
ATLANTIC SALMON (FRESH NOT SMOKED) 08	_____
MUSSELS 09	_____
OYSTERS 10	_____
FARM BARRAMUNDI 11	_____
NONE 12	_____
DON'T KNOW 13	_____

GO TO Q.15a

- Q.15a Thinking in the next five years, do you consider that the sale of fish and seafood products will increase, decrease or remain the same in this store?
- | | |
|-----------------|---|
| INCREASE | 1 |
| DECREASE | 2 |
| REMAIN THE SAME | 3 |
| DON'T KNOW | 4 |

Q.15b And why do you say that?

OFFICE

CLASSIFICATION

For classification purposes only could you please tell me

Q.16a The average weekly turnover (sales) of this store? WRITE IN \$ _____

Q.16b And what proportion or sales value of this would be accounted for by all fish and seafood products. That is, exclude other foods, drinks, cigarettes, confectionery etc? PROBE FOR BEST ESTIMATE.

PROPORTION _____% VALUE \$ _____ DON'T KNOW 9999

Q.16c Of all fish and seafood sales what proportion would be account for by uncooked fish and seafood products?

WRITE IN: _____%

CHECK CONSISTENT WITH
 Q.10a - CODE 2 _____ NONE 000
 DON'T KNOW 101

Q.17 How many full time and part time/casual workers are employed by this store?

FULL TIME: _____
 PART TIME/CASUAL: _____

Q.18 Does this business have any ownership ties with ... READ OUT? RECORD BELOW

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
FISH AND SEAFOOD WHOLESALER	1	2	3
FISH AND SEAFOOD PROCESSOR	1	2	3
FISH AND SEAFOOD RETAILER (IE. UNCOOKED)	1	2	3
ANOTHER RETAILER SELLING COOKED FISH & SEAFOOD	1	2	3

THANK YOU VERY MUCH FOR YOUR HELP AS I SAID, I AM FROM YANN CAMPBELL HOARE WHEELER MARKET RESEARCH. IF YOU WISH I WILL GIVE YOU OUR TELEPHONE NUMBER IF YOU WOULD LIKE TO CHECK ANYTHING. IF YOU WOULD LIKE TO CHECK THE BONA FIDES OF THIS COMPANY, PLEASE CALL THE MARKET RESEARCH LINE ON 008 023642 AND GIVE THE COMPANY NAME: YANN CAMPBELL HOARE WHEELER. CALLS TO THIS NUMBER ARE FREE.

COMPANY NAME: _____

RESPONDENT NAME: _____

ADDRESS: _____

SUBURB: _____ PHONE: _____

I hereby certify that this is a true, accurate and complete interview.

SIGNED: _____ (Interviewer)

DATE: _____