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Factors Influencing Food Demand: Survey Evidence from Japan

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Abstract

Japan has had a long history of protection and a reputation as having a difficult food import market to penetrate. However, with the elimination of import restrictions and other measures since 1988 on foods like dairy products, beef and citrus, Japan has become a much more open agricultural market. The competition to supply this market has intensified. The purpose of this paper is to report the results of a 1997 survey of Japanese firms involved in the food industry in Fukuoka prefecture. The main objective of this survey was to obtain information on the factors that firms involved in the Japanese food industry believe influence the food purchasing decisions of Japanese consumers.

Introduction

According to the Food and Agricultural Policy Research Centre (1997), in the post war period, Japanese food consumption has passed through three phases. The first period, covering the period from the end of the war to the mid 1950s, was a period when the government strived to increase food production in order to remove the spectre of hunger from Japan. The second period went from the mid 1950s to the first half of the 1970s. It was characterised by a diversification and westernisation of Japanese diets. The third phase extends from the second half of the 1970s to the present. It has been a period of continued diversification of diet and eating patterns. Family members often dine separately or in fast food restaurants.

Through all of these periods, Japan has been an important market for Australian agriculture. Yet, it is not clear that Japan is well understood (Riethmuller, 1998). In an attempt to add to the stock of knowledge about Japan, a survey of Japanese firms involved in food processing/manufacturing was undertaken in 1997. The purpose of this paper is to report some of the findings of this survey.

The survey

A questionnaire in Japanese and a covering letter also in Japanese outlining the objectives of the study and requesting the co-operation of the respondent were mailed to the managers of 112 companies in Fukuoka prefecture. The mailout took place in January 1997. Each of the firms in the survey was listed in the Japan Food Newspaper Corporation (1996) *Food Industry List of Companies: Food Industry Business*

Guide 1995 Yearbook. The questionnaire consisted of 14 questions on a number of issues relating to Japanese consumer preferences, production and trade. Most questions had multiple parts and options.

Of the 112 questionnaires mailed, 48 questionnaires were returned, and 39 of these provided the data presented in this paper. The other nine questionnaires were not completed in sufficient level of detail to be used in the study. The sample size for each questionis variable because not all of the questions were answered by the respondents. The surveyed firms were a cross-section of very small to very large processed food and beverage manufacturers. A majority of the small firms employed mainly part-time workers. This may be because the use of part-time workers gives the firms flexibility, since it enables the size of the firm's labour force to be adjusted depending on business conditions. In Japan, the majority of part-time employees in the processed food industry are unskilled female workers. In recent years, with the decline of the Japanese economy and decreases in agricultural farm incomes, a large number of Japanese farmers' wives have been entering part-time employment positions such as those offered in the food industry.

Japanese consumer preferences

From a list developed after discussions with Japanese food industry researchers, the firms were asked to indicate what factors they thought Japanese consumers consider important when purchasing food products. There were nine possibilities in the list. As well, the firms were given the opportunity to provide their own answer through the use of "other" as a response. The factors chosen by the sample firms are shown in Table 1. Quality/freshness, taste and price were selected by the majority of respondents. The firm managers were also asked to provide a ranking of their choices. Quality/freshness, tastes and price in that order are the factors that were listed as the most important to Japanese consumers in the view of over 90 per cent of the managers. Over one third of those responding to this question listed quality/freshness as the most important factor for consumers.

These surveyed firms covered a range of industries: there were four seafood processors, three firms were dairy manufacturers, two firms were engaged in beef processing, two cereal manufacturers, two vegetable manufacturers, and a pork processor. Consumer concern over food quality/freshness is a well known characteristic of food markets in high income countries. The situation is no different in Japan. See, for example, the studies by Snapp and Knipe (1990) and Smith and Riethmuller (1999). Concern with food quality/freshness is probably attributable to the high levels of seafood and fresh vegetables in the Japanese diet, where freshness is crucial.

Table 1 - Factors that Japanese consumers consider when purchasing food products: the views of managers of Japanese food processing companies

			Times ranked		
Responses	**Number**	**Per cent**	**One**	**Two**	**Three**
Quality/Freshness	31	21.4	14	11	1
Taste	29	20.0	13	7	3
Price	26	13.1	9	5	4
Convenience	17	11.7	2	1	6
Design of Packaging	12	8.2	0	3	4
Nutritional Value of the Product	10	8.2	0	3	5
Size/Quantity of the Product	8	7.6	0	1	4
Shelf-life	7	4.8	0	1	3
Domestically Produced Product	4	1.4	0	1	1
Others: Safety/Reliability	1	0.1	0	0	1
Totals	145	100.0	38	33	32

Source: Firm Survey
Notes: Rank One, Rank Two and Rank Three represent the number of times that the factors were ranked as the most important, second most important and third most important respectively, by the sample firms.

Taste was also ranked as the most important factor by over one third of the firm managers. This is not surprising given that Japanese consumers are generally viewed as being very particular about the taste or flavour of food. Japanese consumers' tastes are influenced by culture, customs and traditional beliefs. For example, Japanese sushi restaurants do not employ female chefs because according to folklore, women's hands are warmer than men's hands and this affects the flavour of raw seafood (AgExporter, 1996, p.23).

Another factor selected as one of the three most important factors was convenience. Traditionally, Japanese wives placed much pride in their cooking and in the preparation time it requires. It is said that the culinary skills of a Japanese wife could be judged on her ability to prepare five or six dishes based upon one food, such as eggplant (*nasu*). To prepare a variety of dishes from one major ingredient takes a lot of preparation time and requires fresh produce.

While this is still true today to some degree, many supermarkets in Japan now supply services designed to reduce the preparation time of food. Examples include the slicing of meat to individual requirements and the skinning and cleaning of fish. In smaller local supermarkets, fish and shellfish are stocked live in glass tanks so the customer can select the fish or shellfish that they want to be skinned, cleaned and filleted to their individual requirements. Food industry sources claim that these services are important, especially to working mothers, as a practical means of time organisation.

Are consumer preferences changing?

The majority (82 per cent) of the firms responding to the survey indicated that they believe that Japanese food tastes had changed over the five years 1991 to 1996. They also felt that preferences will change again over the five years 1997 to 2002. While a variety of reasons were put forward to support this view, in both periods, health and safety issues tended to dominate the explanations given by the firms that responded to this question. The preoccupation of Japanese consumers with food safety is attributable to a number of factors:

During the Uruguay Round of trade negotiations, health and safety issues associated with the access of foreign food was a topic frequently discussed by the Japanese media. Because of this, the importance attached to this issue is not surprising.

There have been a series of food contamination scares in recent years, and some of these, such as the one involving contaminated radish, have led to the deaths of consumers. These scares were widely publicised by the Japanese media.

As well as the above, there is much anecdotal evidence to suggest that Japanese consumers are very sensitive to food safety issues and this appears to be especially true when imported food is involved. For example, following the BSE crisis or 'Mad Cow Disease' outbreak in the United Kingdom in March 1996, Japanese beef industry sources expressed concern over consumers' reluctance to buy any type of imported beef. This is despite the fact that Japan does not import beef from the United Kingdom. Japanese consumers' sensitivity to health and safety issues are also reflected in the trend towards the consumption of chemical free agricultural products and the growth in organic farming in Japan (Bell, Ng, Waring and Vereker, 1992).

Organically farmed products usually retail at prices well above the retail prices for foods that are not organically grown. There are many indicators that suggest Japanese consumers are willing to pay high prices for organically grown rice, fruit and vegetables. For example, a popular brand of organically grown rice uses ducks instead of pesticides in the paddy fields. In 1997, a five kilogram bag of this organically grown rice was retailing for around 5000 Japanese yen, which is two to three times as expensive as the average retail price for a five kilogram bag of rice. US organically grown rice was selling at about the same price in early 1998.

The second most frequent response to the reasons why the firms believed Japanese consumers' preferences are altering is due to changes in the way food is consumed. Behind this response is the view that the consumers' dietary lifestyles - how and when they eat food - have changed in recent years. One firm said that Japanese consumers snack more often then they did in the 1980s and eat out more regularly. Statistics reported in the MAFF (1996) Annual Report on the Family Income and Expenditure Survey bear this out.

According to this survey the share of total food expenditure spent on eating out by the average family increased from 6.6 per cent in 1965 to 16.2 per cent in 1995. Because of this, the firm has started to produce ready to consume products that are sold as small portions. Another firm said that changes in the way food is consumed can be seen from the growing space in supermarkets devoted to highly processed convenience foods. These include processed dairy products, canned fruits, frozen vegetables and fully prepared sushi.

An increased desire for ethnic foods was also identified as a change in consumer preferences. Some of the firms suggested that overseas travel may be largely responsible for the popularity of ethnic foods such as those from Spain and Italy. The number of Japanese travelling abroad has increased over the last twenty years. For example, in 1980 less than four million Japanese traveled overseas. In 1996, however, almost 14 million Japanese people made overseas trips - about 11 per cent of the population (Statistics Bureau, 1998). Other explanations given for a likely increase in the consumption of foreign cuisine were travel related behaviour television programs that always seem to include a segment on food in the foreign destination; and the growth in the number of European and Asian restaurants. Of the non-Japanese restaurants, Chinese and oriental style restaurants are the most common. Between 1982 and 1988, the number of these restaurants grew faster than Japanese and western style restaurants (Riethmuller, 1994, p.133).

Steps/Strategies implemented to cater for changing consumer preferences

A common strategy adopted by the firms that responded to the survey was to increase spending on research and development (R&D). This involved a range of different strategies. Some firms conducted market surveys to determine how consumers' tastes had changed and then developed new technologies to produce new or altered products to meet consumers' requirements. Two of the firms (a dairy manufacturer and a sugar manufacturer) said that the Japanese food market changes quickly and that 'fad' food products have become increasingly representative of the food market. In the view of these firm managers, up-to-date information is essential to keep abreast of market trends. Other popular strategies employed to cater for changing preferences included using high quality ingredients and advertising the nutritional value of the firm's food products.

Five firms explained that they will continue to market their products in small portions because Japanese consumers buy groceries almost on a daily basis and tend to buy smaller quantities of most food items. One explanation for these buying habits is that many Japanese families in the major urban centres live in apartments that are small by US or Australian standards. These are typically located close to medium sized supermarkets and convenience stores. Car parking spaces at these supermarkets and convenience stores are at least very limited.

Therefore, shoppers often ride bicycles or walk to and from these stores. This limits the groceries that can be bought at any one time. In addition, the apartments provide little storage space for food. The lack of storage space also makes it necessary to shop frequently for food. Finally, many Japanese dishes are based upon seafood and vegetables. These are at their best when fresh, so Japanese people tend to buy them everyday or at least every second or third day.

The elderly in Japan

One of the most important demographic changes to have occurred in the post World War II period in Japan, is the steady increase in the average life expectancy. Increased longevity has resulted in substantial ageing or ‘greying' of the Japanese population. Therefore, the firms were asked to list the steps/strategies taken to deal with the ageing of the population. Twenty five firms out of the 39 responding indicated that they have implemented specific strategies.

Six firms said that elderly Japanese consumers prefer to consume traditional style foods with well known ingredients and easily identifiable packaging. For example, a manufacturer of Japanese style cakes stressed the importance of the putting the history of the firm and the cake on the box in which the cake is contained. The reason given by the firm for doing this is twofold. First, to convey the message to consumers that a reputable firm has produced the product. Second, a number of dishes in Japan have folklore and ancient customs associated with their development. In the firm's view, elderly Japanese consumers like to know how the recipe for the cake was developed.

A relatively new market in Japan's food industry is the supply of specially formulated food products. These are designed to target particular groups that have some medical condition or that are interested in the prevention of some medical ailment. An example of this is the recent appearance of ‘calcium up' dairy products, designed for elderly consumers suffering with osteoporosis or for those interested in having adequate calcium in their diet. Four firms stated that they supply foods that target specific health problems of the aged. Advertising campaigns promoting milk and dairy products in Japan are examples of this medically oriented marketing strategy.

It has been said that the boom in the health benefits of certain foods was behind the growth in natto consumption in the late 1990s. Natto is fermented soybean, and it was first documented in the Heian era (794 to 1192). Scientists have found it contains an enzyme that breaks down blood clots, while the bacteria in the fermentation process of the soy beans can prevent the multiplication of E.coli 0-157 (Daily Yomiuri, 1998).

Factors influencing trading partners and advice for Australian food companies

Japan is currently the world's largest importer of agricultural products, and the largest importer of processed food in Asia. Therefore, the questionnaire was also concerned with issues pertaining to the sample firms' import status. Twenty six of the respondent firms were importers of raw materials and/or final food products. The firms were asked to indicate the main factors influencing their choice of trading partners from a list of nine possible options. Again, these options were developed following consultation with people knowledgeable about Japan's food industry. Firms were also given the opportunity to provide their own answer through the use of "other" as a response. Quality/freshness, price and quantity supplied were the most frequent responses. Fifteen of the 26 importing firms ranked quality/freshness as the most important factor influencing their choice of trading partners.

The final question was an open-ended question designed to elicit advice/suggestions from the Japanese firms to Australian food companies wishing to export food products to Japan. Over 20 per cent of the responses pointed out that Australian firms need to realise the importance of supplying high quality/fresh products to Japan. The suggestions made by the respondent firms are summarised in Table 2. It needs to be noted that these suggestions came from a wide range of manufacturers. Their suggestions were typically market specific. For example, a fruit manufacturer stated that while foreign fruit may taste delicious, the fruit often arrives bruised and is rarely uniform in size and colour.

As mentioned already, food safety is a major issue in Japan. There are very strict health and safety standards for agricultural and food products. The managers six of the firms responding to the survey suggested that foreign firms should pay more attention to Japan's safety/health standards. In two cases the respondents said that foreign firms, including Australian firms, should try to obtain a Japanese Agricultural Standards (JAS) certification label if they wish to sell more in Japan. The JAS label ensures that the food product has been inspected for standards, quality and safety. Consumer concerns and political lobbying lead to the introduction of the JAS in 1970. In the early to mid 1990s the JAS quality certification label applied to more than 40 000 food products and had established a reliable reputation among Japanese consumers (Williams, 1996, p.105). Foreign food exporting firms can gain the JAS mark if their production and processing plant passes JAS inspections.

Table 2 - Advice/Suggestions made to Australian food companies

Suggestions	Number of mentions	Percentage of mentions
Quality/freshness imperative	8	22.9

Follow safety/health standards	6	16.7
Understand/research Japanese consumers/tradition/culture	5	14.3
Partnerships/joint ventures	3	8.6
Use familiar ingredients/materials	3	8.6
Reliable supply	3	8.6
Supply smaller packages	2	5.7
Regional differences in food expectations	2	5.7
Understand consumer cooperative requirements	1	2.9
Sell agricultural products only	1	2.9
Reduce prices	1	2.9
Totals	35	100.0

Source: Firm Survey

Five firm managers suggested that non Japanese firms often do not understand the importance of Japanese history and tradition in the preparation and consumption of food. The way beef is prepared and consumed provides an example of how traditional beliefs influence consumption behaviour. Very little beef in Japan is eaten as steak. The reason for this dates back to the Meiji era after the ban on beef consumption was lifted. Since then beef has been sold in paper-thin slices so consumers avoid seeing blood in their kitchen. In addition, sliced beef is often boiled in water, which according to Shinto belief is a means of purification (Longworth, 1983; Simpson *et al*., 1996, p.40).

Two firms - a confectionery manufacturer and an alcoholic beverage manufacturer - said that food exporting companies should be aware that there are regional differences in food requirements. The examples they gave included regional differences in presentation, packaging and ingredients used. The confectionery manufacturer said that many Japanese consumers are very loyal and prefer to purchase products produced and processed in the region in which they live. This firm suggested that firms wishing to enter the Japanese food market should seriously consider a partnership with a Japanese firm to fully understand Japanese consumers' food preferences. Regional differences in food expectations as well as differences in regional cuisines may discourage these firms from achieving economies of scale.

Concluding comments

A feature of this study is that it is based on the opinions and experience of Japanese firms involved in the food industry. Due to the small size of the sample, the results of this study can not be used to make inferences about the population of Japanese firms. Because of concerns about protecting the identity of the firms, little was said about what type of manufacturer ranked which factor as important. Nonetheless, the survey provides a useful case study of firms involved in the food industry in Fukuoka prefecture. According to the managers of the sample firms, a variety of factors influence the food preferences of Japanese consumers.

However, in the view of the managers of the majority of these firms, the most important factors are quality/freshness, taste and price. In addition, convenience and the visual appearance of the product are key elements in the purchasing decisions made by the consumers. The opening of the Japanese market to agricultural imports means that Japanese consumers have greater access to imported foods. Beef, citrus, cheese, vegetables and processed foods were among the products that faced fewer border restrictions in the 1990s than was the case in earlier periods.

Most firm managers felt the food preferences of consumers have changed, with consumers becoming even more concerned about health and safety issues and eating fewer traditional meals in the home. In order to cater for changing consumer preferences, a number of firm managers said that they have increased expenditure on R&D. These respondents stressed the importance of collecting information on consumer behaviour and continual upgrading of equipment and technology. Using high quality ingredients, advertising the nutritional value and providing smaller and more convenient products were other strategies employed to cater for changing consumer preferences.

Bearing in mind the limitations associated with this survey, the information gathered from the managers of the food processing firms highlights the importance of factors other than prices and income in influencing the purchasing behaviour of consumers. The importance attached to quality/freshness and health and safety considerations means that estimating price and income elasticities may be of limited use in making predictions as to how consumer demand is likely to change as a result of changes in prices caused by trade liberalisation or fluctuations in the exchange rate.

New Agricultural Basic Law for Food, Agriculture and Rural Areas will replace the Agricultural Basic Law of 1961 as the framework for Japan's food sector by the end of this century. Consumers are given high priority in the new legislation, particularly with regard to having access to safer, high quality and reasonably priced food. These were the factors that the survey found were important as far as food processing and food manufacturing firm managers were concerned. Hence, any food exporter that chooses not to place the highest priority on these factors does so at its peril.

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