

6.2 Comparison of Consumer Behaviour Across Countries

Both Malaysia and US consumers were concerned about product quality, such as nutritional value and taste, but Malaysians also rank price as one of the determinant on making their purchasing decision (see Table 6.18). Consumers ranked brand and packaging as less important features compared to factors, such as quality, hygiene, and price.

In view this, companies that intend to penetrate the local market are required to consider marketing strategic product costing and pricing, in addition to product quality and hygiene. For export markets, product qualities such as taste, nutritional value, and ingredients should be highlighted as well as shorter preparation and cooking time.

Table 6.18 Factors for Consuming Chilled and Frozen Food

Feature Ranking	Malaysia ¹	US ²	Japan ²
1	Convenience	Convenience	Convenience
2	East to get	Taste	Variety
3	Time saving	Variety	Cost
4	Easy to serve		
5	Delicious		
6	Reasonable price		
7	Easy to prepare		
8	Healthy products		
9	Longer shelf life		
10	Many choices		

Notes: 1. Source- Study Team
2. Source: USDA/FAS, JA5028, 1995

As shown in Table 6.18 and Table 6.19, consumers in advanced countries, such as the U.S, Japan and U.K., appreciate the ease of food preparation and convenience, and better quality products. This trend is highly related to the socio-economic changes and the increased number of women in the work force.

The consumption trend also shows that UK consumers are switching towards chilled foods, which they perceive to be fresher and better quality, and an overall growing interest in vegetarian foods. In the US, the Home Meal Replacement (HMR) concept is well accepted as most of the consumers have busy life styles and prefer to spend less time cooking.

Table 6.19 Comparison of Processed Food Features among Malaysia and US Consumers

Feature Ranking (1 is the most important feature)	Consumer Survey Malaysia ¹	US Survey
	Features of chilled and frozen food seen as important:	Features of packaged meals seen as important:
1	Quality	Taste
2	Hygiene	Nutrition
3	Nutritious/Healthy	Good value
4	Price	Appealing ingredients
5	Taste	Convenience
6	Halal status	Easy directions
7	Convenience	Low fat and low calorie
8	Brand	Trusted brand name
9	Outlet	Appealing packaging photo
10	Packaging	

Table 6.20 Comparison of Research Results Across Countries

Comparison variables	Malaysia	US	UK
Food consumption	Main reasons for consuming chilled and frozen food are convenience, easy to get, time saving, delicious, reasonable price, longer shelf life	Consumers recognize frozen food products as effective home meal solutions, and particularly appreciate the ease and quickness of their preparation.	There has been a drop in the number of consumers eating out. This has been matched with an increase in convenience foods, and particularly upgrades to quality products.
Workforce structure	Women consist of 34% of the total workforce. In urban areas, the increase of women in the work force has spurred the movement towards convenience food, which presents an opportunity for chilled and frozen food producers.	US job growth and the increase of women in the work force have spurred the movement toward meal solutions, which presents an opportunity for the frozen food department.	Key socio economic changes have impacted on the use of frozen foods. Approximately 68% of women of working age are now employed, which has resulted in a reduction in leisure time and, therefore, increased demand for convenience foods. An increase in one-person households has also increased the demand for "one-person" ready meals. The breakdown of the traditional family meal has resulted in members of the family eating at different times, and requiring different types of foods.

Table 6.20 Comparison of Research Results Across Countries (continued)

Comparison variables	Malaysia	US	UK
Retail food sector	<p>Chilled and frozen food display space in supermarket only accounted for 10-20 percent of shelf space. The food are generally organised in standard chiller and freezer cabinets. Hypermarket such as Carrefour, Makro, and Giant allocate substantial more space for fresh food relative to frozen food.</p> <p>In general, the chilled and frozen food section in the retail outlets are displayed at the end of the traffic pattern within the store.</p>	<p>On average, frozen food departments in supermarkets have gained 20 percent or more space over the past ten years, and dollar sales of frozen food products in supermarkets increased by 3.2 percent between 1996-1997.</p> <p>Concerning store layout, 85.4 percent of respondents to the survey commissioned for "Freeze Frame", want frozen food to be last in the traffic pattern within the store, as compared to 12.3 percent who want it in the middle, or 2.4 percent who want it in the beginning.</p>	<p>Though the sale of frozen foods have grown over the last five years, the overall market is slowing as consumers switch to chilled foods, which they perceive to be fresher and of better quality.</p> <p>Chilled meals are dominated by own-label such as Marks & Spencer (M & S), the leading retailer accounts for 51.9 percent of sales.</p> <p>There has been intense competition with respect to ready meals from retailers' own label and budget brands, selling at just under 99p. The healthy eating sector has also been seriously devalued, because of intense price-cutting, and an increase in budget brands.</p>

Table 6.20 Comparison of Research Results Across Countries (continued)

Comparison variables	Malaysia	US	UK
Consumption trend	According to local manufacturers, their most saleable products include chicken burgers, chicken nuggets, chicken balls, chicken franks, beef burgers, beef nuggets, fish chips, fish cakes, fish balls, crab sticks, and <i>sotong</i> balls.	The fastest growing categories are dinner solutions, with frozen pizzas, poultry, meat, seafood and dinners/entrees accounting for five of the top six growth categories.	<p>There is a growing interest in vegetarian foods, with sales of frozen vegetarian foods up by 18 percent to £121 million. The frozen, added-value vegetables burgers and grills market has increased in value by 31 percent since 1992 to over £55 million.</p> <p>It is estimated that sales will grow by a further 12 percent in the next four years. The vegetarian market has been helped by the major retailers who have:</p> <ul style="list-style-type: none"> • invested money into frozen vegetarian convenience foods • dedicated more shelf space to vegetarian products, so raising the product profile • provided market support for both branded and own label products.

Table 6.20 Comparison of Research Results Across Countries (continued)

Comparison variables	Malaysia	US	UK
Consumption pattern	<p>The consumption of chilled and frozen food is not proportionate to the size of the households. Average consumers are likely to consume about 2-5 standard packages of chilled and frozen food with consumption frequency about 2-3 times per month.</p> <p>In general, consumers still prefer fresh food relative to chilled and frozen food</p>	<p>Baby Boomers and households with incomes in the range of USD45,000 to USD75,000 and with four or more family members, are most likely to buy frozen breakfast items, juice, vegetables and pizzas.</p>	<p>There is suggestion that consumers are "returning to the kitchen", due to increased media coverage on cooking.</p>
Future trend	<p>About 40% of the respondents agree that they will consume more chilled and frozen food in future.</p>	<p>15.6% of those questioned expected to be buying more frozen food in the future, 81.8% planned to buy about the same amount, and only 2.6% expected to buy less.</p>	
Consumption indicator	<p>98.6 percent of the respondents in the survey conducted said they have a normal fridge and only 13.9 percent said they have an independent freezer.</p>	<p>55% of participants in a survey conducted by The Consumer Network said their freezers were very crowded, and 70% of higher income respondents answered the same way.</p>	

Table 6.20 Comparison of Research Results Across Countries (continued)

Comparison variables	Malaysia	US	UK
Marketing element	<p>Sales promotion such as sample testing in the supermarket department normally attracts significant attention</p> <p>As local consumers emphasize more on freshness of the food, the effective theme for marketing chilled and frozen foods would be the same as US market as suggested by Mona Doyle, which are "The Other Fresh Foods" or "The Fresh Alternative".</p>	<p>The marketing of frozen food products as healthful and great tasting may provide a marketing advantage for the frozen food category.</p> <p>Special promotions impact sales in the frozen food department more dramatically than in other supermarket departments.</p> <p>According to Mona Doyle, chief executive officer of The Consumer Network, an effective theme for marketing frozen foods would be "The Other Fresh Foods" or "The Fresh Alternative," as commercial freezing captures and preserves food at its peak of freshness.</p>	<p>The ready meal market is very competitive, and food manufacturers in the UK are seeing their shares eroded by the further penetration of own label products, which jeopardizes their ability to invest money in further new product development.</p> <p>Domestic manufacturers dominate the UK frozen food market. Any overseas interest is mainly confined to either the US or Canada. There is potential for international brands to enter the market, especially with the diverse range of tastes demanded by the indigenous UK population</p>
Market potential	<p>Locally produce ethnic food may have higher potential for export market as demand for ethnic food in overseas market seem to be substantial relative to local market.</p> <p>On the other hand, the western style of chilled and frozen food may attract local consumers</p>	<p>A real opportunity for the frozen food department is in marketing to ethnic groups, particularly Hispanics, which is the fastest-growing ethnic market.</p>	<p>Quality is paramount. The rise of foreign holidays has created a demand for ethnic foods. Spicy foods are well suited to the ready meals market, as they readily retain their flavors. However, consumers still expect high quality, as well as greater authenticity of taste.</p>
Source	Chilled & Frozen Food Consumer and Industry Survey, 2000	American Frozen Food Institute 2000 (On-line information)	Canadian High commission UK Market Product Profiles (on-line information)

Japanese consumers on the other hand, could be grouped under four categories, namely, Traditional, Modern Traditional, Cosmopolitan and Sensitive sub-segments (see Table 6.21). The target consumers for chilled and frozen food may be the Cosmopolitan and Modern traditional sub-segments. About 81 million people in Japan fall under these two categories that stay in major urban areas to sub-urban areas. The urban areas' residents who lead a busier lifestyle may consume more convenience food. Aside from convenience, Japanese are particular about product quality and as their incomes increase, premium products are preferred.

Table 6.21 Japan: Projected Consumer Profile 2007

Traditional	Modern traditional	Cosmopolitan	Sensitive
Characteristics <ul style="list-style-type: none"> • 26 million • Older age groups (65/70+) • Rural/less-urbanized areas • Range of incomes, though not highest • Naturally conservative in outlook 	Characteristics <ul style="list-style-type: none"> • 38 million • Range of ages • 2nd rank urban • Housewives, families • Range of incomes, though not highest • Old-style corporate/ office jobs (corporate worker 55+) • Group-minded 	Characteristics <ul style="list-style-type: none"> • 45 million • Younger age groups (to about 55) • Major urban areas • Mid to high income • Old and new-style (more flexible) jobs • Busy lifestyle • Change, progress 	Characteristics <ul style="list-style-type: none"> • 19 million • Mainly young • Others who have time • Low to mid income • Very aware of culture • New approach to old values
Type of Food Demanded			
<ul style="list-style-type: none"> • Traditional diet • Traditional meal times • More leisure time: eating out becoming more important • Health (especially older people in urban areas) 	<ul style="list-style-type: none"> • Imported/ international food if taste and price suite • Still ritual (eating out for social interaction) • Health (especially for women) • Gourmet products as income snobbery / for cachet 	<ul style="list-style-type: none"> • International tastes a regular part of diet • Convenience key flexible meal times, snacking, some grazing • Health • Follow individual preferences • Gourmet/premium products if they demonstrate value 	<ul style="list-style-type: none"> • Health/ freshness/ "naturalness" key • Aware of cultural/ economic/ ecological significance of food • Traditional/Asian tastes rather than Western • Will make effort/ pay more for food which conforms to values

In Southeast Asia, China and India, consumers may be classified under Elite, Consumer Class, and Pre-consumer class (see Table 6.22). The focus market is the Consumer Class with about 106 million population in South East Asia, 203 million in China and 260 million in India. They comprise mainly younger age groups who live in urban areas and fall under the middle to high-income group. In addition, most women in this category are highly involved in the workforce.

These target markets demand various types of convenience food include chilled and frozen food. In China and India markets, processed foods with minimally value-added may attract the markets' attention. As for the South East Asia region, the market appears to appreciate higher value added products as consumers are more educated and sophisticated.

In Malaysia, consumers are still conservative and obscure about the quality and nutritional value of chilled and frozen food. Consumers normally tend to make a direct comparison between fresh food and frozen food, preferring fresh food which they believe are better quality than frozen food.

However, with the changes in workforce structure and life style, the demand for chilled and frozen food is expected to increase in the future. In Malaysia, the proportion of working women is about 34 percent of the total workforce. By 2007, it is predicted that about 21.2 million Malaysians will be living in major cities, urban areas, new development areas, and dynamic rural areas. This will create an opportunity for marketing chilled and frozen food (source: The World of Ingredients, March/April 1998).

Table 6.22 South East Asia, China and India: Consumer Composition Projection 2007

Elite	Consumer Class	Pre-consumer Class
<ul style="list-style-type: none"> • 25 million in South East Asia: • Indonesia 11 million • Thailand 5.5 million • Philippines 4.3 million • Malaysia 2.4 million • Singapore 1.2 million • Vietnam under 1 million • 35 million in China • 21 million in India • Range of age: not oldest • Major cities, new development areas, dynamic rural areas • Highest incomes • Well-educated and travelled • Women likely not to work • Growing focus on national/ ethno-culture identities 	<ul style="list-style-type: none"> • 106 million in South East Asia: • Thailand 45 million • Indonesia 22 million • Malaysia 18.8 million • Philippines 13 million • Vietnam 5.3 million • Singapore 2.1 million • 204 million in China • 260 million in India • Range of age: especially younger age groups • Urban areas • Mid to high incomes • Jobs in sectors which are the focus of economic development • Literate, brand-aware • Women likely to work 	<ul style="list-style-type: none"> • 120 million in South East Asia: • Indonesia 66 million • The Philippines 25.8 million • Vietnam 22 million • Thailand 4.8 million • Malaysia 1.3 million • 437 million in China • 332 million in India • Range of ages • Rural and urban areas • Some disposable income • Jobs in variety of industries/ sectors, but at low levels of skill and responsibility • International brands are symbol of aspirations

	South East Asia	China & India
Key focuses	<ul style="list-style-type: none"> • Higher added value for the mass market • Increase consumer sophistication 	<ul style="list-style-type: none"> • Child • Convenience • Basic and value

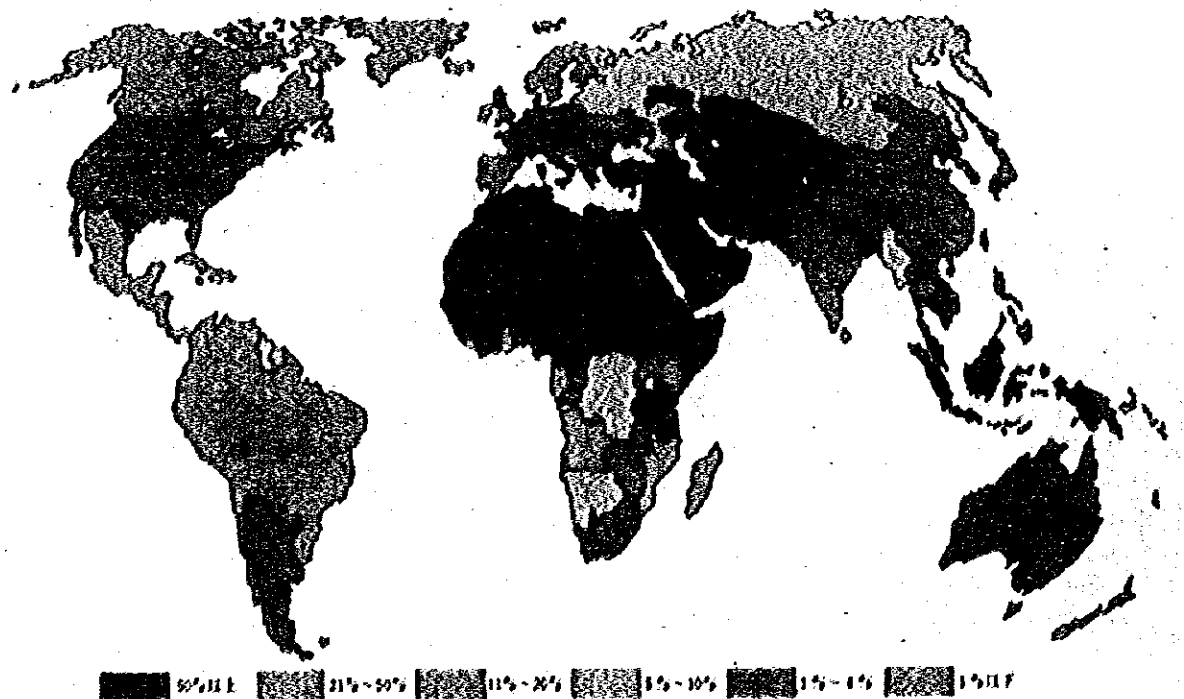
Note: The poor/very poor group is not given as these households' demand for processed food is assumed to be minimal.

Source: The World of Ingredients, March/April 1998 which original source come from Promar International.

6.3 Halal Food Market

The world demand for halal food is growing and estimated to be worth USD80 billion (RM304 billion) a year (Babji, 1998). The large Muslim populations in the Middle East, North America, South and Southeast Asia, the former Soviet Union, and China present a lucrative market for the food industry (Chaudry, 1992). In addition, Malaysia has targeted to attract 200,000 Middle East tourists to our country in 2000 (Ahmad, 1999). Besides earnings from tourism activities, the demand for halal food will increase especially in hotels and local restaurants, local fast foods and traditional food outlets.

Chart 6.9 Estimated World Muslims Population 1999



The international trade in halal food is quite enormous. As such, there exists a huge market and opportunities in halal food business. In recent years, the increasing awareness of Muslims worldwide to uphold the tenets of their religion has opened up a demand for halal food in compliance with their religious requirements. This trend of increasing demand for halal food is expected to continue in parallel with the increasing Muslim population (more than 1.5 billion people), and the increasing consciousness of Muslims to eat halal food.

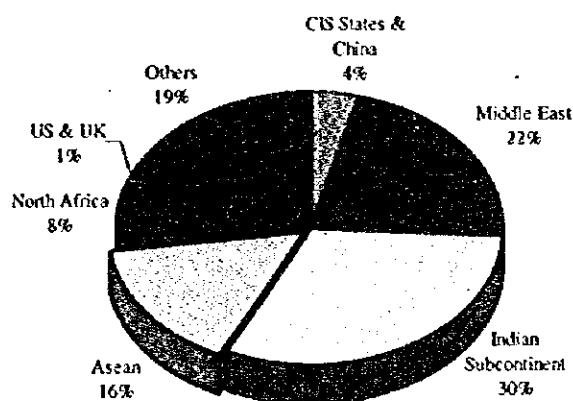
6.3.1 Chilled and Frozen Halal Food Market

Though the market for halal food products comes from Muslim and non-Muslim countries, however, absolute demand comes from almost 1.5 billion Muslim populations around the world who are the consumers of halal food. This number represents 25 percent of the world's total population. The birth rate of the Muslim population is also the highest in the world and is expected to grow at a rate of three percent annually (INHAFEX, 1999).

Most of the Muslim population is concentrated in the Middle East region such as Saudi Arabia, UAE, Turkey, Kuwait, Iran and Iraq; Indian subcontinent such as India, Pakistan, Afghanistan, Bangladesh, CIS countries; and ASEAN countries.

There are approximately 250 million Muslims in ASEAN countries alone. ASEAN countries such as Indonesia, Singapore, Thailand and Philippines, which are considered developing countries, are a high potential for the marketing of halal processed food products not just because of its geographic location but also due to the growing number of Muslim citizens.

Chart 6.10 Distribution of World Muslim Population 1999



Source: www.imangroup.org

Based on the Muslim population and population growth rate, the current frozen food segment alone is estimated at USD28 billion and is projected to grow at 4.3 percent a year. BY 2010, the market is expected to reach USD51 billion. The halal chilled and frozen food in Malaysia accounts for about 85 percent of the total chilled and frozen food market and is estimated at RM1.7 billion.

In order to assess the potential overseas market for chilled and frozen halal food products, several countries were selected based on their potential as profitable markets for Malaysia (see Table 6.23). The following are several criteria in the selection of these potential markets:

- Percentage of Muslim population and the level of its density ensure a good demand for halal food. E.g., Indonesia, India and Turkey.
- Countries that are currently in the process of modernisation or the developing countries in which their people's lifestyle and food consumption pattern is currently changing. E.g., China and South Africa.
- Market that is easy to access in terms of its geographic location and the countries current status as Malaysia's trading partners. E.g., ASEAN countries.
- Countries that depend on imported foods to meet domestic demand. E.g. Singapore, Brunei and United Kingdom.
- Countries that implement strict regulations on Muslims food and have Muslim and halal food organisations. E.g. United States, United Kingdom, and South Africa.

The increasing purchasing power of Muslims especially those who live in developing and developed countries, also mean increased consumption of halal food. Islamic awareness of halal food is also expanding worldwide especially in non-Muslim countries, and this in turn, creates even more, new and vibrant markets for halal food products.

Table 6.23 Potential Overseas Market for Chilled and Frozen Halal Food

Major Countries	Total Population	Percentage of Muslim Population in the Country	Total Muslim Population (Est. Year 1999)
Indonesia	212,941,810	87.00%	190,821,233
India	984,003,683	14.00%	142,512,208
Turkey	64,566,511	99.80%	66,515,870
China	1,236,914,658	3.00%	37,725,980
Saudi Arabia	20,785,955	100.00%	22,227,727
United States	270,311,756	2.50%	6,875,891
Philippines	77,725,862	5.00%	4,050,438
Thailand	60,037,366	3.80%	2,325,894
United Kingdom	58,970,119	1.82%	1,078,629
South Africa	42,834,520	2.00%	881,193
Singapore	3,490,356	14.90%	532,619
Brunei	315,292	63.00%	208,446

Source: IMAN Muslim Population Study Database (www.imangroup.org/311.html)

The general situation of various halal food markets are described below:

a) The Southeast Asian Market

The geographic location of several Southeast Asian countries shall be the competitive advantage for Malaysia to access the halal food market in these countries. With low transportation and communication costs, local companies can export their halal food products with ease to neighbouring countries that have a high demand for halal food, such as Indonesia. Indonesia has the largest Muslim population in the world with approximately 190.8 million Muslims. Indonesia's import of foodstuffs from its trading partners in 1998 was about US\$1.8 billion.

A survey conducted in 1994 in Philippines showed that half of the total family expenditure goes to food and the growth rate of food expenditure is 25.3 percent annually. The increasing demand on food forced Philippines to import more foodstuffs. Meanwhile, for Singapore and Brunei, one of their main imports is foodstuffs, due to the lack of domestic agricultural production. This represents an opportunity for Malaysia to export foodstuffs to these countries, which have significant Muslims population.

Thailand is a strong producer of halal food and they can be the major threat to Malaysia's halal food trade. The halal logo introduced by the Thailand's Export Promotion Department, which is similar to Malaysia's halal logo, has become the symbol of confidence to Muslim consumers in several countries. Thailand earns more than USD4,000 million annually from their food exports. One of their marketing strategies is to emphasise on the food's unique qualities and tastes.

b) The Middle East Market

With almost 100 percent of its total population being Muslims, Saudi Arabia is one of the potential markets for Malaysian halal food products. As a major destination for millions of pilgrims from around the world every year, the business potential for halal food is huge. Due to advantages such as time saving and quality, the variety of frozen and chilled food products is in great demand among pilgrims and foreign tourists.

The growing population, high per capita income, liberal trade policies and limited agricultural production have created a market for consumer food products in the United Arab Emirates (UAE). UAE imports 90 percent of its total food requirements and about 55 percent of the food imports are transhipped to other countries such as Oman, Qatar, Bahrain, Kuwait and Iran. In the UAE, food import is expected to increase by 10 to 15 percent annually to meet domestic demands. The UAE market offers a great opportunity to Malaysia's export products as UAE charges very low tariffs between zero to four percent.

c) The Asian Food Market

With China's high number of Muslims (about 37.7 million), the halal frozen food market in China is also large.

In China, the demand for frozen food products is increasing, as there is a shift from fresh food to frozen food product consumption. The growth in the retail volume of frozen products sale was 63.7 percent between 1991 to 1995.

There are four factors that influence the shift towards frozen food consumption in China, namely

- Increase in disposable income that led to the increase in consumers' food expenditure.
- Increase in awareness of frozen food's time saving benefits.
- Increase in the use of refrigeration among households.
- Growth in the Western style fast food industry that encourages the purchasing of frozen and chilled food with the same taste.

In Taiwan, the frozen food market is growing rapidly with the increase in food quality and safety, steady economic growth, higher income levels, proliferation of supermarkets and hypermarkets, and also changes in the consumers' demographics. For example, young Taiwanese who are exposed to foreign education, international media, and Western lifestyles is driving the demand for Western-style frozen food.

India also has great demand for halal food products, as it has the second largest Muslim population in the world, with 142.5 million people.

d) The North American Market

The 6.9 million Muslims in the US represent a big potential market for chilled and frozen halal food.

The US and Malaysia has good trade relationship. Such trade relationships can be the supporting factor for Malaysia to introduce the chilled and frozen halal food products in the US market. The Malaysian Government has appointed the Islamic Food and Nutrition Council of America (IFANCA) to promote halal food consumption in the US, through halal supervision and certification services, consultations, research and publications, besides sponsoring conferences, seminars, and symposiums.

e) The African Market

South Africa is a potential market for halal food not just because of its high Muslim population but also their dependency on imported food. Factors such as expansion of the South Africa's tourism industry, increase in working women and general interest for quick meals offer opportunities for microwave-able products, food packs, and frozen goods.

Halal food policies in South Africa is administered by the South Africa National Halal Authority (SANHA). The major barrier to enter the South Africa market is its strict quality standards for imported agricultural goods. South Africa only imports meat from abattoirs that have been approved by their Department of Meat Hygiene.

f) The European Market

With the Muslim population of 1.1 million (consisting of mostly Indians and Pakistanis), the UK offers an opportunity for the halal frozen food market. The establishment of The Muslim Food Board United Kingdom enhances the marketability of all products that hold halal certification.

g) Malaysia Halal Food Market

In Malaysia, the demand for halal food comes from the 14 million Muslim population that accounts for 70 percent of our total population. It is safe to say the demand can actually be more taking into consideration non-Muslims who have no problems eating halal food.

The market size for halal chilled and frozen food in Malaysia is about 85 percent of the total local chilled and frozen food consumption and is estimated at RM1.7 billion for 1999. This estimate is based on the values from Table 3.2 (refer to Chapter 3) given earlier. Basically, almost all chilled and frozen food in Malaysia, except for pork and its by-products, are halal in nature.

Malaysia is viewed by other Muslim countries as the most advanced Islamic country and has been a "model" to many. Being a predominantly Muslim country, Malaysia has established credibility and confidence among importers and consumers of halal food worldwide, with its strict halal food procedures and proper halal food guidelines. Another advantage is that we are well recognised as a Muslim country, an OIC member, and a country that encourages the implementation of Islamic syariah in all aspects.

The Malaysian halal logo and certificate is internationally recognised, such as in the US, EU and Australia. For example, meat and dairy exporters in Australia use Malaysian halal logo certificate when trading with Malaysia and other Muslim countries. One of the reasons for the recognition is because the Malaysian halal standard incorporates the principal of HACCP and GMP.

The existing local food companies are another of Malaysia's strengths to become a halal food hub. International and local giant companies with successful business performances such as Nestle (M) Bhd, MAS Catering Sdn Bhd, Unilever (M) Sdn. Bhd., Ajinomoto (M) Bhd and KFC (M) Bhd., have played an effective role in promoting Malaysia as halal food producer. These companies are using the halal logo on their halal products as a competitive advantage and a promotional tool to access foreign markets. Thus, this indirectly assist Malaysia in gaining international recognition.

Table 6.24 Current Local Companies in the Halal Food Market

Companies	Present Market
Ayamas Food Corporation Berhad	Malaysia, China, Hong Kong & ASEAN countries
Kart Food Industries Sdn Bhd	Malaysia, Singapore, United Kingdom, France, Australia & ASEAN countries
Prima Agri-Products Sdn Bhd	Malaysia, Brunei, Taiwan, Vietnam, Thailand & Indonesia
De-Luxe Food Services Sdn Bhd	Malaysia
HSH Frozen Foods Sdn Bhd	Malaysia

Source: Malaysia Food & Beverage Manufacturers & Exporters Directory (Year 2000) Industry Survey 2000

A possible way to increase Malaysia's likelihood to be a hub for halal chilled and frozen food products, particularly for the chilled and frozen ready-to-serve and ready-to-cook meals, is to import those chilled and frozen products from the main exporting countries, and add value to the products before re-exporting them back to those countries and other Muslim countries.

The first countries Malaysia could penetrate are those in the Near East region since these countries import more of the five categories of products than export them. Since Malaysia's focus would be on value-added products processed from imported raw materials, ASEAN countries, particular those with substantial Muslim population, also represent potential markets. Another boon is the abolition of tariff under the AFTA agreement to be implemented in 2003.

6.3.2 Government Halal Food Policy

The Malaysian Government strongly supports the halal food industry as evidenced by its various programs. The inclusion of the halal food in the Second Industrial Master Plan (IMP2, 1996-2005), setting halal and haram committees and also forming working groups on halal food for developing Malaysian SIRIM standards are some of the examples. In the ASEAN region, Malaysia, Thailand, Brunei, Singapore, Philippines, and Indonesia have also jointly prepared standard halal food requirements in the region through the ASEAN Ministers of Agriculture and Forestry (AMAF). Internationally, Malaysia has also played an important role in halal food standard such as Codex Alimentarius Commission.

In the IMP2, one of the strategic directions is to position Malaysia as an international halal food hub. The IMP2 has identified several high potential sectors in the food processing business, which include processing of meat products, especially the halal meat and livestock product. However, Malaysia lacks comparative advantage in many areas of food production. If we want to be competitive and gain a position in local, regional and international food markets, we need to improve on our technology, infrastructure, and product development for halal food.

6.3.3 Halal Food Control

As Malaysia is in a good position to be the center for halal food production, our Government has introduced several guidelines and control mechanisms to ensure the halal status of food. The problem of 'halal-haram' food may not be apparent to non-Muslims. This is compounded by the fact that Malaysia imports a high percentage of its food from non-Muslim countries. To many non-Muslims halal food only pertains to the exclusion of pork. To a Muslim, it is not enough for the food to be 'pork-free'; it has to be 'guilt-free' too. Therefore, the control of halal food is viewed by the Government as a sensitive and serious matter. The Government's commitment to facilitate the provision of halal food for the Muslim consumers in the country is reflected through the establishment of the following legal infrastructures:

- Trade Description (Use of Expression 'Halal') Order 1975
- Trade Description (Marking of Food) Order 1975
- Customs (Prohibition of Imports) Order 1988
- Animal (Importation) Order 1962
- Local by-laws as well as its enforcement
- Establishment of halal guidelines and certification activities by JAKIM
- Establishment of SIRIM Halal Standard

Besides the existing 'Guidelines on Foods, Drinks and Goods Utilized by Muslims' prepared by JAKIM, SIRIM is currently preparing Standard for Halal Foods to facilitate both local and international food manufacturers to produce halal food according to Islamic requirements.

Since 1980's, the halal food related matters had been under the supervision of Islamic Affairs Division of the Prime Minister's Department, where the National Committee for the Examination of Food and Materials for Use by Muslim was formed to handle matters pertaining to halal and haram issues. The Division has changed its name to the Department of Islamic Development Malaysia (JAKIM) in 1997.

Initially, the role of the JAKIM was to liaise with the Ministry of Domestic / International Trade and Industry in implementing and enforcing the Trade Description Act, 1972. In 1994, JAKIM introduced the halal logo and enforced the Halal Certification System. Due to high demand for halal certification and the inadequate personnel in JAKIM, the task of halal food certification was privatised to Iham Daya Sdn Bhd in September 1998. Iham Daya Sdn Bhd undertakes the role of evaluation, inspection and analyses of products and premises for the purpose of certification and recommendation to JAKIM.

Nevertheless, JAKIM remains as the national authority that controls, monitors, and regulates all halal food products sold in the domestic market and for export. The control of halal food is currently addressed through a multi-agency approach lead by JAKIM. Other agencies include the Ministry of Domestic Trade and Consumer Affairs, the Veterinary Services Department, the Customs and Excise Department, local authorities, Ministry of Health, Malaysian Agricultural Research and Development Institute (MARDI), Standards Industrial Research Institute of Malaysia (SIRIM), Chemistry Department, and local universities and research institutions.

A halal logo was introduced by JAKIM to help Muslim consumers differentiate food products that have obtained official government approval and those that have not. The Halal Verification Certificate issued by JAKIM with the logo is used as a control mechanism for food handlers, importers, and sellers on the use of Government's halal logo.

6.3.4 Standardisation of Halal Food for International Trade

The Codex Alimentarius Commission, a joint body of the Food and Agriculture Organisation (FAO) and World Health Organisation (WHO) of the United Nations, plays a vital role in facilitating international trade through the development of an international food standard, guideline and code of practice. In relation to this, Malaysia has prepared the 'General Guidelines For Use of The Term Halal', adopted in 1997 as an international guideline (Ministry of Health, 2000).

Similar to other Codex labelling guidelines, the 'Guidelines For Use of The Term Halal' would complement the 'Codex General Guidelines on Claims'. The guidelines provide the necessary basic and general information on how food could be produced and claimed as halal. Similarly at the regional level, 'ASEAN General Guidelines on the Preparation and Handling of Halal Food' under the auspices of the ASEAN Ministers of Agriculture and Forestry (AMAF), is at the final stage of deliberation, before being adopted as a regional instrument for facilitating inter-ASEAN trade.

6.3.5 Roles and Efforts of Government Agencies in Positioning Malaysia as Halal Food Hub

Various government agencies are involved in the effort of positioning Malaysia as the international halal food hub. Ministry of Agriculture (MOA) is the leading agency that is coordinating and facilitating this effort. The committee on Malaysian Halal Food Hub is still working on the concept paper at the present moment.

There are ongoing efforts in creating various halal food zone / park in states such as in Pahang, Selangor, Malacca, Negri Sembilan, and Perlis where certain areas are allocated for the creation of halal food production zones. These efforts include development of infrastructure and food processing facilities. At regional level, the halal food zones planned are such as the Indonesia-Malaysia-Thailand (IMT), Brunei-Indonesia-Malaysia (BIM) and Indonesia-Malaysia-Singapore (IMS) triangles.

According to the MOA, as part of the NAP3 strategic approach to develop agricultural-based products, the Ministry will identify key products and markets based on the consumers' and market demand, preferences, and potential. Halal livestock and livestock value-added products have been identified for expansion and scrutiny to meet the national food requirement and enhance competitiveness and profitability. This move is complementary with the IMP2's objectives, which identifies food processing as one of the sources of future growth for the country.

The Department of Veterinary Services (DVS) under the Ministry of Agriculture is the custody body that ensures the quality of livestock products by strengthening veterinary services to maintain and enforce high veterinary sanitary standards for imports and exports of livestock products.

In order to achieve this, DVS has introduced the following measures:

- Establishing standards on livestock products.
- Promoting Good Animal Husbandry Practices (GAHP) in all livestock farms.
- Strengthening accreditation schemes through Quality Assurance Program (QAP).
- Promoting Good Manufacturing Practices (GMP) and Hazards Analysis Critical Control Points (HACCP) in all abattoirs and processing plants by the DVS in order to maintain and improve quality, cleanliness, and safety of food products.
- Liasing with JAKIM to inspect the slaughtering procedures and conditions of abattoirs.

The support foundation of various government agencies are shown in Table 6.25.

In strengthening the supportive organisations, the following are areas highlighted:

a) Infrastructure and Support Services

- Slaughter, processing and support facilities for halal products will be expanded and upgraded. This will include the establishment of "centralized slaughter facilities" with veterinary supervision to replace the current "wet slaughter market". There will also be infrastructure at entry points for exporting and importing halal products including storage systems.
- Cold rooms, warehouses, and containers will be built and better transportation system will developed for proper distribution purposes.
- Skilled manpower will be developed through accredited training schemes. Industry funded training programs will be encouraged to complement training provided by Government institutions and the academia.

Table 6.25 The Summaries of the Support Foundation from Government Agencies for Halal Food Industry

Infrastructure and Support Services	R&D and Food Processing Technology	Laws and Regulations	Financial & Capital	Institution:	Promotion
DVS, MARDI, SIRIM, UKM, UPM, UUM, USM, Ports, public and private abattoir	DVS, MARDI, SIRIM, UPM	Ministry of Domestic Trade and Consumer affair, DVS, Custom (Entry of Port), local by laws	MIDA, Public and Private, financial institution	1. Accreditation 2. Health and Safety Std. 3. Halal Std. MOH, DVS, IDSB, JAKIM, SIRIM	MATRADE, MITI
<ul style="list-style-type: none"> Human resource development training and educating Slaughtering services Ports and transportation facilities Storage facilities 	<ul style="list-style-type: none"> Fresh, chilled and frozen meat technology Halal food ingredient technology Product development from bio-technology 	<ul style="list-style-type: none"> Laws and regulations: Trade description 1972 (Use of Expression "Halal") Order, 1975 Trade Description 1972 (Marking of Food) Order, 1975 The Animal Rule 1962-Section 8 Local by-laws: Educate consumer Handle consumer complaints 	<ul style="list-style-type: none"> Financed by the promoted products/ activities - promotion of investments acts, 1986 under processing of agricultural produce livestock and livestock product Halal food industry financing 	<ul style="list-style-type: none"> Code of practice for food hygiene GMP HACCP Certification Veterinary Health Mark Logo Halal Certification Malaysia Halal Standard 	<ul style="list-style-type: none"> Conduct international seminars, conferences, and trade shows Facilitate the trade-import and export of halal products internationally

b) R&D and Food Processing Technology

- Government involvement in R&D will be strengthened and consolidated to increase overall institutional capacity and efficiency to support the industry. The R&D are carried out by several institutions, especially MARDI, DVS, UKM and UPM, on new product development, food biotechnology, halal food ingredient, disease diagnostic, and prevention and control on livestock.
- According to the director of MARDI, Dr. Abu Bakar Hussin (1999), MARDI has a very strong team of food specialists and technologists contributing to the food processing technology, such as creating a new supplement for halal ingredient such as the vegetable-based gelatine to substitute the meat-based gelatine. The advancement of food biotechnology has instigated new issues to halal food production. For example, if the swine DNA is transplanted to the yeast cell for producing a kind of protein, is the new protein halal or haram? The fermentation of soy sauce and tapai, which produces very low level of alcohol in the final product, is it halal? These types of issues will be forwarded to the Majlis Fatwa of JAKIM to determine the halal status of the product. MARDI is trying to develop proper processing methods, new technology, new ingredients, and material that are safe, clean, healthy, and halal.

c) Laws and Regulations

- Ministry of Domestic Trade and Consumer Affairs has some authority to regulate halal food in Malaysia. Trade Description 1972 (Use of Expression "Halal" Order 1975 and the Marking of Food Order 1975) has stated clearly the condition of using the halal expression and the labelling of halal food, as well as the penalty of misuse of the halal expression and marking. However, as explained by Encik Mohd. Rabani of Ministry of Domestic Trade and Consumer Affairs, the use of halal and the marking of halal are voluntary, which mean that halal products do not need to be marked halal. However, if a manufacturer uses the halal expression and the halal logo and the products are found to be non-halal, they will be penalised.
- For importation of meat and livestock to Malaysia, all the meat and livestock must be halal, safe and disease free under the Animal Rule 1962, which is enforced by the Custom and Excise Department. Halal certifications from the exporting country must be recognised by the Malaysian Government in order to ensure the products are halal, and prevent confusion and misunderstanding.

d) Capital and Financial Support

- Public and private financial institutions are helping halal food manufacturers to get adequate funding in investing to be halal food producers. According to Ms Lilywati (1999), Deputy Director, Agro Industries Division of MIDA, several banks such as Bank Negara, Bank Islam, and Bank Pertanian have special packages to help manufacturers get sufficient funding
- In addition, suitable incentives for automation investment will be provided, and import tax on specialised livestock farm and processing equipment will be abolished. The main incentives for the investment in manufacturing and agriculture sectors are provided for in the Promotion of Investment Act, 1986 and the Income Tax, 1967. MIDA is also providing incentives to food processors and manufacturers in the form of import duty exemptions for raw ingredients and tax incentives to encourage investments in infrastructure development to attract local and foreign investors.
- The NAP3 comes with RM32.4 billion Plan of Action for a 13-year period (Singh, 1998). Since promoting Malaysia as an international halal food hub is under the medium-term measure, sufficient amount of fund is expected to be allocated in this action plan.

e) Institution of Accreditation and Standards

- Besides JAKIM's official logo, the Veterinary Health Logo is another accreditation to enhance the halal product. This DVS logo ensures the meat and meat product is safe to consume and disease free.
- The food quality division of MOH is the agency in charge of the HACCP accreditation in Malaysia. The Guidelines for HACCP Certification Scheme (1998) is ready and available to assist food manufacture to oversee the food manufacturing and practice the GMP.

f) Promotion

- MATRADE is the agency responsible for promoting Malaysian halal food under the Malaysia brand name. Ministry of International Trade and Industry (MITI) is also playing an important role in the international arena to promote Malaysia as an international halal food hub. Both these agencies also conduct trade exhibitions, seminars, and conferences to promote and 'sell' our halal food worldwide especially to United States, European Nations, Middle East, and OIC countries where there are substantial Muslims populations. MITI also facilitates efforts in identifying new halal export markets such as Commonwealth of Independent States (CIS) and Russia.

g) The Industrial Master Plan 2 (IMP2)

The following are IMP2's additional measures in the halal meat processing industry:

- Facilitate importation of meat from new sources for the processing industry
- Promote joint ventures in beef and dairy industry both local and overseas to ensure consistent supply of meat and feed ingredients
- Designate specific zones for livestock production and promote large-scale cattle and sheep integration under plantation crops
- Promote branded halal food internationally

6.3.6 Roles and Efforts by Private Sector In Positioning Malaysia as Halal Food Hub

a) Organisation and Products

In this study, most of the respondents see the future of the halal market as very bright. The CEOs and senior officers said that their companies' management are generally aware of the current and future market of halal food and their responsibilities in providing good, healthy, safe and permissible food to Muslims especially, and non-Muslims as well. Some of the respondent companies have special halal committees responsible for the development of the halal food industry.

Most of the companies also apply either GMP or HACCP or both to ensure good quality of the companies' products. Some adopted ISO 9000 series as well. As mentioned by the Syariah Unit and Majlis Syariah of Prima Agri Products Sdn Bhd and KFC (M) Berhad, the halal factor should be the core basis of their company's quality assurance because halal is a holistic approach that embraces the GMP and HACCP.

b) Promotion

A number of international as well as local food companies are currently being benefited from the halal requirement and capturing larger markets locally and around the world. Examples of some successful companies are Nestle (Malaysia) Berhad, KFC Holdings (M) Berhad, MAS Catering Sdn Bhd, Prima Agri Products Sdn Bhd, Unilever (M) Holding Sdn. Bhd, Golden Arches Restaurant Sdn. Bhd, Halagel (M) Sdn Bhd, Adabi Consumers Industries Sdn Bhd, Ajinomoto (M) Berhad, and Ramly Food Processing Sdn Bhd.

In promoting halal foods, international companies should conduct seminars and conferences during their general meetings with their corporate office and subsidiaries. The industry players should also participate in trade exhibitions at the domestic level and international level and promote their products and Malaysia as a competent halal food producer.

c) Distribution

Food manufacturers are required to guarantee that the distribution system of their products is safe, clean and ensures that their halal food reach customers at the right time, the right place and in good condition. This is in accordance to the requirements of the Trade Description (Use of expression 'Halal') Order 1975 and Trade Description (Marking of Food) Order 1975. Presently, transportation and distribution channel for imported meat products, including chilled and frozen products, strictly follow this requirement. For other halal food products, including chilled and frozen varieties, are distributed through the normal distribution channel, but added care is given to ensure compliance with halal requirements as stipulated.

d) Pricing

Halal product is a value-added product with high quality assurance. The price, therefore, should be reasonable, and affordable to all Muslims and non-Muslims. Our random observations and information provided by some respondents indicate that there is not much price difference between halal and non-halal food. Food manufacturers should absorb the R&D, accreditation on the certificate, and logo as an investment and not a production cost as the halal product is more competitive compared to other quality products. A company's accountability is very crucial because halal is not just a business but also a social responsibility to consumers.

Chapter 7

MARKET POTENTIAL

CHAPTER 7

MARKET POTENTIAL

7.1 Market Drivers

Drivers around the world for consumption of chilled and frozen are common. The stronger drivers are the changing demography and lifestyle of consumers. Household income is increasing, consumers are better educated, and the convenience that chilled and frozen can offer is becoming more appealing to consumers. On the supply side, technology is helping producers respond better to consumers' requirements for more variety and quality of food, albeit at a slower pace.

The following are factors that drive the chilled and frozen industry:

a) Changing demography and lifestyle are the main demand drivers

- Chilled and frozen food is gaining more acceptance as an alternative to fresh food, especially among the higher income and educated group. With income level on the increase, electrical appliances, such as refrigerators, freezers, and microwave ovens are becoming more affordable. The rising level of education combined with higher household incomes is expanding the size of the middle to high-income group and, therefore, the demand for the products. Studies have shown that people with higher income and education level tend to consume more chilled and frozen food.
- There is a growing preference among consumers to spend less time cooking. The number of working women, single parent and dual income households are increasing and they are finding frozen "Home Meal Replacement" suitable for the obvious reasons of convenience and fast food preparation time.
- Research showed that teenagers heavily influence frozen food purchases. The households with teenagers tend to consume more pre-cut/pre-cooked food.
- There is a gradual change in lifestyles from single to triple meals towards lighter meals, and greater health and weight consciousness.

b) Growing food service industry is also creating additional demand

- In the food service sector, frozen food is also gaining favour with restaurants as they try to reduce their operational costs by purchasing processed ingredients in frozen form which reduces preparation time and labour. The same advantages of chilled and frozen food also boost the consumption by end consumers.
- Generally, the food service sector consumes more than 60 percent of total sales of chilled and frozen food. The flourishing food service industry especially in the US, UK and Japan, is one of the main factors driving the demand for chilled and frozen food.

c) More products and better merchandising are encouraging more purchases

- More varieties and better quality of chilled and frozen food are being introduced into the market.
- There are more shopping malls or convenience stores offering chilled and frozen products. Space for chilled and frozen food has also been increasing to accommodate the increasing varieties of better quality products.
- The fact that more shopping malls/superstores and convenience stores offer chilled and frozen products and increasing space to accommodate the products, reflect their mounting confidence.

d) Marketing efforts are creating awareness and improving product perception

- Marketing programmes are important in educating and communicating to consumers the advantages of chilled and frozen food, i.e., chilled and frozen food as the fresh food alternative.
- Promotion activities, especially media advertising and demonstrations are effective in communicating the value of chilled and frozen products, i.e., as good as fresh food, if not better, more hygienic, and tasty. Studies conclude that sales of chilled and frozen food is more promotion-responsive than other products.

e) Improvements in supply chain is producing better quality product and improving output and reducing cost

- Improvement on the cold chain, i.e., better equipment, proper food handling practices, adequate transportation, and storage will encourage higher output and minimise incidences of spoilage.
- With wider use of information technology e.g. the Internet, food processors are better informed of the supply and variety, and are able to make comparisons. The internet enable lower procurement cost as well as providing more sources of supply of chilled and frozen food. At the same time, consumers are able to easily obtain better and faster information related to the chilled and frozen food.

Based on these findings, we conclude that, generally, the chilled and frozen food markets in different countries have similar growth patterns, as market drivers are also similar.

7.2 Market Size Projection and Sensitivity Analysis

7.2.1 Market Size Projection

Malaysia's chilled and frozen food consumption for 1999 has been estimated at approximately 6.0kg per capita (see Table 7.1).

Table 7.1 Estimated Local Consumption* 1999

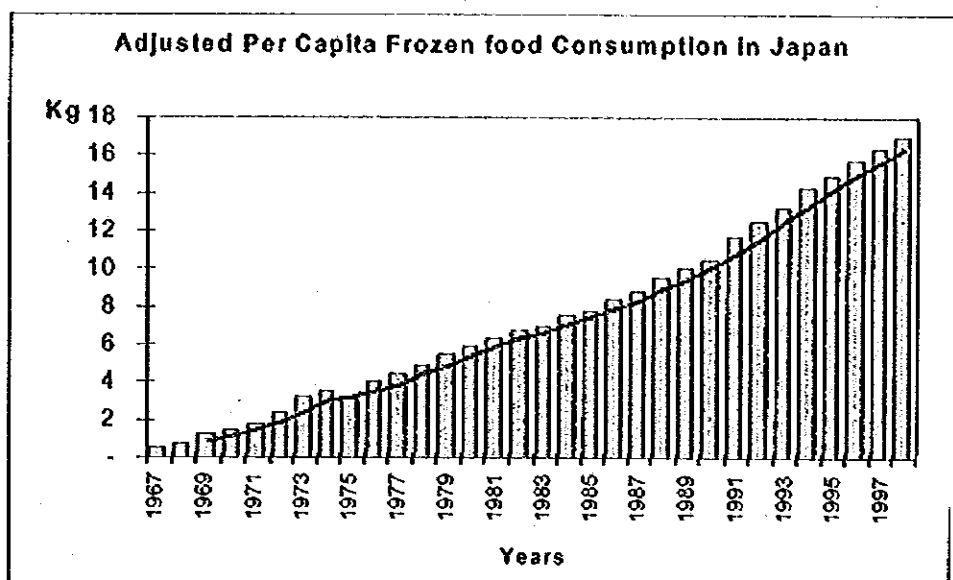
	RM million
Ready meals	9.5
Snacks	42.8
Ingredients	5.6
Vegetables	506.7
Meat & meat-based products	853.7
Seafood*	141.9
	1,560.2

* Domestic consumption = Production add import less export.

Given the universal nature of the drivers of the industry, the study team concludes that the stage of development of the Malaysian chilled and frozen food industry is equivalent to the stage of the industry's development in Japan in 1980. This conclusion is consistent with the opinion of experts with industry knowledge of the Japanese and Malaysian chilled and frozen food industry.

Using the Japanese consumption growth pattern, the study team developed a model to estimate Malaysia's consumption of frozen food from now till year 2010 based on the development of the Japanese chilled and frozen food industry since 1980.

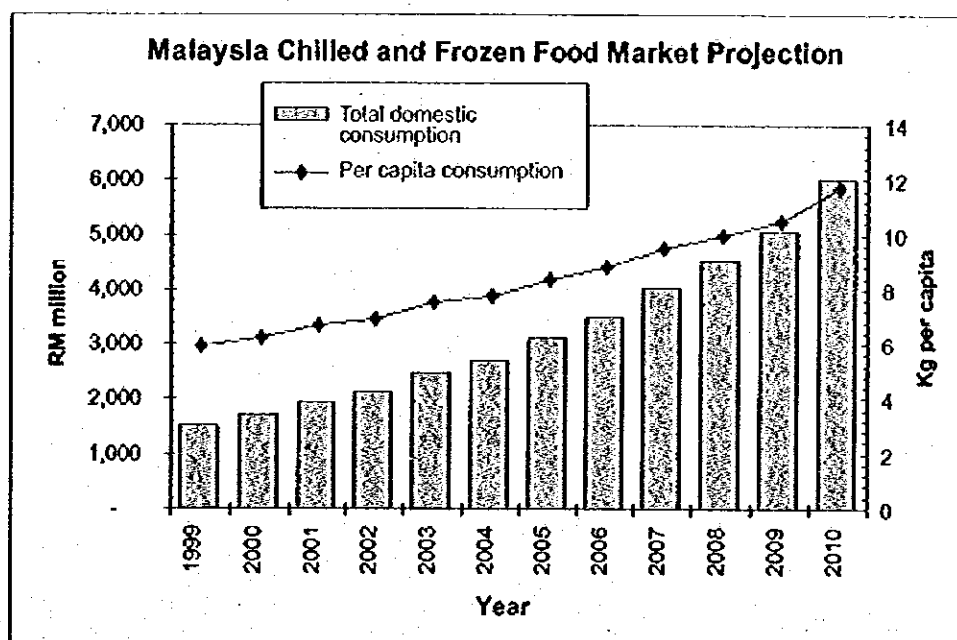
Chart 7.1 Japan: Adjusted Per Capita Frozen Food Consumption



Source: Japan Frozen Food Association

Accordingly, based on Malaysia's 2.0 percent population growth rate¹ projection for the next 10 years, the market size for local chilled and frozen food is projected at RM3.1 billion in 2005 and RM6.0 billion in 2010. Malaysia's chilled and frozen food consumption is projected to increase to 11.7 kg per capita by 2010 (see Chart 7.2).

Chart 7.2 Malaysia Chilled and Frozen Food Market Projection



¹ Source: Statistics Department's estimate.

Table 7.2 Projected Domestic Chilled and Frozen Food Market

Year	Projected Population	Estimated Per Capita Consumption	Total Domestic Consumption	
			'000 Ton	RM million*
1999	22,712	6.13	139,920	1,560
2000	23,166	6.26	145,013	1,697
2001	23,630	6.72	158,804	1,942
2002	24,102	6.93	167,027	2,135
2003	24,584	7.50	184,468	2,464
2004	25,076	7.76	194,691	2,717
2005	25,577	8.34	213,380	3,112
2006	26,089	8.81	229,867	3,504
2007	26,611	9.49	252,419	4,020
2008	27,143	9.99	271,147	4,513
2009	27,686	10.50	290,665	5,056
2010	28,240	11.72	331,088	6,018

* Assuming average price per kg of chilled and frozen food is RM11.20 and inflation rate of 4.5% p.a.

The growth rate for the 4 categories of food are as follows:

Table 7.3 Estimated Growth Rate for Various Chilled and Frozen Food Segments

		Estimated growth per annum	
		2000-2005	2006-2010
Category 1	Ready meals	25.0%	15.0%
Category 2	Snacks	25.0%	15.0%
Category 3	Food Ingredient	10.0%	20.0%
Category 4A	Vegetables	14.5%	19.3%
Category 4B	Meat & meat-based and seafood products	10.0%	10.0%

We foresee higher growth, especially for the ready meals, snacks and vegetables, due to the increase in value-adding activities on these products. Another major source of growth is expected to come from the development and promotion of a wider range of local variety chilled and frozen food, and general growth of food service sector.

Given the above projected growth rate, the following is the projected market size of the various segments:

Table 7.4 Market Size for Various Chilled and Frozen Food Categories

		1999	2005	2010
		RM million	RM million	RM million
Category 1	Ready meals	9.5	36.3	73.0
Category 2	Snacks	42.8	163.3	328.5
Category 3	Food ingredient	5.6	10.0	24.8
Category 4A	Vegetables	506.7	1,138.9	2,750.9
Category 4B	Meat & meat based and seafood products	995.6	1,763.8	2,840.6
Total		1,560.2	3,112.3	6,017.8
Compounded Annual Growth Rate		-	12.2%	13.1%

Table 7.5 Projected Relative Market Size for Various Chilled and Frozen Food Categories

		1999	2005	2010
		%	%	%
Category 1	Ready meals	0.6	1.2	1.3
Category 2	Snacks	2.9	5.5	5.9
Category 3	Food Ingredient	0.4	0.3	0.4
Category 4A	Vegetable	32.4	35.9	43.2
Category 4B	Meat & meat-based and seafood products	63.7	57.0	49.1
		100.0	100.0	100.0

Currently, the chilled food market in Malaysia is not very significant. Statistics on this segment is generally grouped under "fresh and chilled" and there is no systematic and separate statistics available on the consumption of chilled food in Malaysia. For the purpose of projecting the market potential, we assume that the per capita consumption of 6.1 kg estimated above consist only of frozen food. The market potential of the chilled food would be addressed in a separate section.

7.2.2 Projected Domestic Market Size for Chilled Food

Market potential and growth rate for chilled food, except chilled vegetables, is projected to be much lower than the frozen food in Malaysia due to chilled food's greater sensitivity to temperature. The tropical climate is not very "friendly" to chilled food and the temperature tolerance range for chilled food is quite narrow. As such, variations in temperature are a major cause of food hygiene concerns.

The study team concludes that the relative market size of the chilled food (excluding vegetables) is conservatively estimated at around five percent of the total chilled and frozen food market value. In 1999, the chilled vegetables contributed approximately 85 percent of the chilled and frozen vegetables market size. This proportion of chilled vegetables market size is expected to remain relatively the same in the future, as consumers generally prefer freshness.

7.2.3 Sensitivity Analysis

Sensitivity analysis was performed to gauge the impact on projected market size for chilled and frozen food market due to variation in the estimated per capita consumption.

The discussion with various industry experts indicate that Malaysians would likely consume more chilled and frozen food per capita and the growth of per capita consumption in the future may also be faster compared to Japan in the past. Example, Malaysia has a larger young generation demographic composition than Japan, and the younger generation today tends to adapt to new trends faster than the younger generation in the past. Malaysia also has the advantage of starting from a higher platform of the industry development stage compared to Japan as refrigeration technology and home appliances are readily available. Nevertheless, the overall growth trends should be universal for the Japanese and the Malaysian market.

Hence, the projection of Malaysia's consumption of chilled and frozen food in the earlier section represents the lower range of Malaysia's future consumption path.

Sensitivity analysis was carried out to gauge the impact of higher growth and consumption rates for the following scenarios:

	Scenario 1	Scenario 2	Scenario 3
Higher per capita consumption rate	25%	-	25%
Faster consumption growth rate*	-	25%	25%

* As compared to the projected compounded annual growth rate per capita consumption during 1999 to 2010. For example, a 25% faster consumption growth means Malaysians will take approximately 7.5 years to achieve the level of consumption that Japan took 10 years to achieve.

The summary of sensitivity analysis is set out in Table 7.6.

Table 7.6 Summary of Sensitivity Analysis

Year	SCENARIO 1			SCENARIO 2		SCENARIO 3			
	Estimated Per capital consumption	Total consumption		Estimated per capital consumption	Total consumption	Estimated per capital consumption	Total consumption		
	Kg	'000 ton	RM million	Kg	'000 ton	RM million	Kg	'000 ton	RM million
1999	6.13	139,302	1,560	6.13	139,302	1,560	6.13	139,302	1,560
2000	7.82	181,267	2,122	6.82	158,064	1,850	8.53	197,581	2,312
2001	8.40	198,505	2,428	7.33	173,096	2,117	9.16	216,370	2,646
2002	8.66	208,784	2,668	7.55	182,060	2,327	9.44	227,575	2,909
2003	9.38	230,585	3,080	8.18	201,070	2,686	10.22	251,338	3,357
2004	9.71	243,364	3,397	8.46	212,213	2,962	10.58	265,266	3,702
2005	10.43	266,725	3,890	9.09	232,585	3,392	11.37	290,731	4,240
2006	11.01	287,333	4,379	9.60	250,554	3,819	12.00	313,193	4,774
2007	11.86	315,524	5,026	10.34	275,137	4,382	12.92	343,921	5,478
2008	12.49	338,934	5,641	10.89	295,550	4,919	13.61	369,438	6,149
2009	13.12	363,331	6,320	11.44	316,825	5,511	14.30	396,031	6,888
2010	14.66	413,860	7,522	12.78	360,886	6,559	15.97	451,107	8,199

Based on the analysis, the following are the ranges of estimated market size for the Malaysian chilled and frozen food:

Table 7.7 Range of Estimated Domestic Chilled and Frozen Food Market Size

	Per Capita Consumption	Market Value
	Kg	RM billion
2005	8.3 - 11.4	3.1 - 4.2
2010	11.7 - 16.0	6.0 - 8.2

The above results indicate that under more optimistic case (see Table 7.5, Scenario 3), Malaysian's domestic consumption of chilled and frozen food would increase from the present RM1.6 billion to RM8.2 billion by 2010, at a compounded annual growth rate of 16.0 percent. Similarly, under Scenario 3, the per capital consumption of chilled and frozen food in Malaysia would grow from 6 kg to 16 kg at the compounded annual growth rate of 9.3 percent during 2000 to 2010.

7.3 Market Potential by Product Categories

a) Ready-to-Serve Meals

This market is currently very small. However, indications are that demand in this segment of the local market will grow as Malaysia becomes more developed. If the local ready-to-serve meals' market is not developed to meet this anticipated demand, consumers will eventually turn to imports to satisfy their needs. The increasing demand for ethnic food in Western and developed countries are also an opportunity for Malaysia's ready-to-eat meal producers. The study team, in view of the import substitution possibilities and export potential, believes this segment of the market should be aggressively developed.

b) Snacks

The chilled and frozen ready-to-serve meals and snack food market size is currently very small but attractive. It is dominated by a few major producers. Based on the industry survey, this sector has been growing at around 10 to 20 percent p.a. for the past few years. For the purpose of this study, a higher growth of 25 percent p.a. is projected for 2000 to 2005 as industry players indicated that they are expanding their production in the near future. As longer period projections are subject to higher degree of uncertainty, we have moderated the growth rate to 15 percent p.a. for the following five years, i.e., from 2006 to 2010.

The global increasing demand for snacks and ethnic food offers good export potential for local producers. Already several local snack manufacturers have successfully penetrated the export markets despite limitation and importing countries' stringent requirements. The snack segment should be developed to strengthen our existing foundation to take advantage of the global export potential.

c) Ingredients

The consumption of chilled and frozen ingredients in Malaysia, currently, is a mere RM5.6 million (0.4 percent of total frozen food market). Frozen ingredient consumption is mainly an urban phenomenon.

However, with the development of the food service sector, e.g. the central kitchen, this segment will see an increase. Chilled and frozen food ingredients are facing competition from the easily available fresh and dried varieties that have a longer shelf life. For these reasons, the study team concludes that this segment offers limited opportunities.

The ingredient categories can be divided into 2 segments as follows:

(1) For industrial use

Currently, this segment is undeveloped. There is hardly any local supplier capable of producing the quality and quantity of processed ingredients required by the food service operators. In addition, our industry survey of food service operators also suggest that most of them do not feel an immediate need to use frozen ingredients instead of the fresh or dry form.

However, this segment has vast untapped potential in the future, given the trend of food service operators in seeking ways to reduce operating costs. It is projected that the frozen ingredient for industrial use will initially grow at a slow pace for the next five years. We expect that as more chilled and frozen products are developed and increasing activities of the food service sector, the demand for chilled and frozen ingredient will catch up at a subsequently faster rate.

(2) For end consumer use

This segment is expected to grow at a faster rate as compared to the industrial use of chilled and frozen ingredient segment, due to the following:

- Current base is very small
- Barrier to entry, e.g., process technology and cost of investment is lower, thus, more producers especially smaller ones will enter the market once the market starts developing

The average annual growth rate for the overall food ingredient segment is estimated at 10 percent at the next five years and 20 percent for 2006 to 2010.

Future potential of chilled and frozen ingredients relies heavily on the following factors:

- Product development – to be more advantageous compared to its fresh/dry form equivalent
- Marketing – able to educate consumers of its benefits and persuade food service operators to use more frozen ingredients

d) Vegetables

For the market potential projection, we have grouped chilled and frozen vegetables as an individual category as we expect this market segment will experience significant growth in the future, mainly driven by the demand of food service sector. For comparison, in Japan, the frozen food for institutional use is approximately 70 percent of total frozen food consumption, and approximately 30 to 40 percent for European countries.

Currently in Malaysia, most chilled and frozen vegetables especially the minimally-processed vegetables are imported.

There is a relatively big ready market for chilled and frozen processed vegetables, with the supply currently met by imports. There is limited scope for import substitutions as a large portion of these imported vegetables are not economically or technically feasible to be grown in Malaysia. Nevertheless, within these constraints, there are potentials to locally undertake value-adding processing on imported and locally grown vegetables, e.g. minimally-processed vegetables for institutional users.

We estimate that this segment would be growing at approximately 15.8 percent and 18.8 percent p.a. for 2000 to 2005 and 2006 to 2010 respectively.

e) Meat and Meat-Based and Seafood Products

The meat-based and seafood segment is a mature market in Malaysia. This is the biggest segment of the market, accounting for almost 63 percent of the 1999 market segment. This segment is expected to remain one of the biggest segments even in 2010. Based on our industry survey, the industry is projected to growth at 10 percent p.a. through the projection period. Meat-based products are mainly for local consumption, while a large percentage of seafood is exported. This segment is well developed and dominated by a few large players, some of who are public-listed companies in Malaysia.

Meat, poultry, and seafood are largely constrained by the limited supplies of local meat and seafood. The processed meat or meat-based products have limited scope to export to Western countries, due to its inability to meet stringent regulatory requirements of these countries.

Chapter 8

KEY CHALLENGES AND ISSUES

CHAPTER 8

KEY CHALLENGES AND ISSUES

8.1 SWOT Analysis

8.1.1 Chilled and Frozen Food Industry

A SWOT (Strength, Weaknesses, Opportunities, Threats) analysis was carried out on the present state of the industry. It is worthwhile to mention that SWOT analysis only provides a general view of strategic direction for the industry and more analysis is required before any strategy could be articulated with a certain level of authority.

The result of the SWOT analysis is provided below:

a) Strengths

- Malaysian ethnic food has already penetrated overseas markets and is well received.
- Local poultry and seafood industry is well-established and as competitive as the foreign products.
- Good industrial infrastructure already in place could attract new investors.
- Major players are upgrading their technology and production systems and are catching up with international operators.
- Sufficient trained food technologists are available.
- Support provided by the government in terms of liberal input importation and funding.
- Public research institutions are already in place, thus, reducing set-up time.

b) Weaknesses

- Local agricultural output is insufficient to support the requirements of the food processing industry, in terms of quantity, quality, and consistency.
- Malaysia is a high cost producer of food products as most key raw materials needed are imported.
- Malaysian exporters have difficulties in meeting international food regulatory standards and big buyers' requirements of importing countries.
- There is very little local commercial research and development on chilled and frozen food, especially on ethnic food.
- High cost of imported machinery.
- Lack of suitable equipment for production of local ethnic food.
- Performance of locally fabricated machinery is not at par with imported ones in terms of efficiency and effectiveness, resulting in lower food quality.
- Lack of technical knowledge on food standards and selection of proper equipment and monitoring devices.
- General perception of frozen food as being inferior to fresh food.
- Lack of appreciation of the quality parameter of chilled and frozen food.
- Not able to export meat-based products since Malaysia is not certified compliant with international food standards.

b) Weaknesses (continued)

- Improper design and quality of storage and equipment maintenance.
- Lack of know-how and poor practices in handling chilled and frozen food.
- Lack of cold truck network outside Klang Valley.
- Under-utilisation of trained manpower.
- Local workers are not keen to work in chilled and frozen food industry due to cold operating environment.

c) Opportunities

- Most of the food processing sectors is at infancy or initial stage of growth. There is a big scope for expansion, especially into value-added food products.
- There is a growing trend towards the consumption of convenience food that are easy to cook and ready to eat.
- Malaysia is still a developing country and urbanisation rate is rising. This translates to opportunities for expansion.
- There are growing business opportunities through franchising and the central kitchen concept.
- Strong Government support as a result of recent refocusing on the agricultural sector.

d) Threats

- Trade globalisation will result in more competitive foreign food products into Malaysia and retarding the growth of the local industry.
- Competition from non-chilled and frozen foods.
- Stringent food regulations and importing countries' customer requirements.
- Competition from non-chilled and frozen foods.

8.1.2 Positioning Malaysia as a Halal Food Hub

A separate SWOT analysis was carried out on Malaysia's aspiration to be a hub for halal chilled and frozen food.

a) Strengths

- Malaysia is a Muslim country with high appreciation on halal food.
- Malaysia is a member of OIC and a respected Muslim country.
- Malaysian halal logo, verification and certification system are generally well recognised worldwide.
- The Government strongly supports the halal food industry.
- There is good industrial infrastructure with well-connected transportation network and utilities supply.
- Existing major players in the food industry have been actively promoting halal logo.

b) Weaknesses

- Lack of local raw materials. Key raw materials need to be imported and out sourced.
- Poor linkage among the several Government agencies in solving problems and implementing strategies with no concrete action plans yet. Example, MATRADE is promoting the Malaysian brand name but not a Malaysian halal brand.
- No regulation on mandatory official JAKIM halal certification and logo.
- Impact of the privatisation of halal certification with regard to fees especially to the SMIs.

c) Opportunities

- Muslim population is growing at a faster rate than the world average, which means increasing demand for halal food.
- Large regional (ASEAN) Muslim market.
- Muslim purchasing power is increasing.
- Islamic awareness among Muslims are expanding worldwide especially in non-Muslim countries.
- Commonwealth of Independent State (CIS) countries are new markets for halal food. These countries have a large Muslim population
- Liberalisation of trade worldwide, and harmonising of halal regulations and guidelines globally through Codex, will facilitate halal food trading.

d) Threats

- Other Muslim countries are beginning to compete with Malaysia as halal food producers.
- Non-Muslim countries with large Muslim minorities are in a position to produce halal food, e.g., China.
- Countries with abundant local agricultural resources, i.e., good local meat industry such as Australia and New Zealand, are potential competitors.
- Export issues and constraint on halal standards, food labelling, rivalry among the certification bodies and certification system and different halal concepts.
- Possibility of losing the competitive advantage of the "Malaysian Halal" logo due to standardisation of Halal Logo in ASEAN.

8.2 Malaysia Chilled and Frozen Market Key Challenges and Issues

In the developed countries, chilled and frozen food sector has grown to be a significant proportion of the total food business and is anticipated to show continuous growth. In comparison, Malaysia's chilled and frozen food business is still in its infancy. While the seafood and meat sectors have shown good growth, the other chilled and frozen sectors such as complete meals, snacks, food ingredients including local vegetables, are relatively undeveloped.

For Malaysia to further develop the chilled and frozen food sector, several key issues have to be addressed. These issues can be divided into common and industry specific issues.

8.2.1 Common Issues

The following are various common issues:

a) Production

(1) Technical Know-how

In view of the sensitivity of chilled and frozen food to quality and safety factors, the advancement of this sector depends significantly on the technical know-how covering this industry, particularly on the following aspects:

- Selection of proper equipment and use of monitoring devices for process, storage, transportation and retailing
- Compliance to quality and product safety systems required by industry or regulatory authorities or both
- Adherence to Good Manufacturing Practices by processors, support services, (transporters, cold room operators, suppliers) wholesalers, importers and retailers

Many of the players depend heavily on the equipment and ingredients suppliers or their agents for the processing technology, and do not have the benefit of getting objective, independent, and professional advice on the technology suitable for their operations.

(2) Affordability of Chilling and Freezing Machinery

SMIs may not have the resources and capability to upgrade themselves and meet the requirements of the market. The production of chilled and frozen food requires high investment in machinery and equipment and many SMI operators have difficulties in adopting newer technologies in their manufacturing processes.

Due to the high costs of imported machinery, many players are turning to machinery, which are locally fabricated and may not perform to the same level as the imported ones. The product as such may not attain the desired quality consistency. Failure to address this will affect the long-term growth of this sector, as consumers become more discerning about chilled and frozen food. Needless to say, this will become more crucial in the export market.

(3) Availability of Local Raw Materials

The availability of local raw materials has remained a long-standing national issue in making the many locally produced foods competitive in the local and overseas markets. Local agricultural producers are not able to supply the required raw material to the processing industry, in terms of quality, quantity, and consistency of supply. This issue has been extensively addressed in NAP3 and other national policies.

For the chilled and frozen food industry, the lack of local raw material alone is not a critical issue, as the food processors are able to import the required materials at better quality, and sometimes at lower cost than the local source. The current trend towards liberalising international trade will worsen for Malaysia's situation, unless the country is able to compete by improving their technology and know-how, and perform well in high value-added sectors.

b) Technology and R & D

(1) Technology

Many of the good performance chillers and freezers are high capacity machines, while many players in the local chilled and frozen food sectors operate at rather low outputs. Machines are not being used economically. There is also lack of suitable machinery to produce most of the local ethnic food.

(2) R&D

Investments in R&D in Malaysia are very limited. Under the 7th Malaysia Plan about RM1.2 billion (less than 1 percent of GDP) is allocated by the Government to fund Research Projects In Priority Areas (IRPA), which includes agriculture and food sectors. During the 1996 to 1999, only 17 out of 3228 IRPA Projects were undertaken on chilled and frozen food. Most of these have high components on product research but low on development, which is crucial for any technology's adoption by the industry.

In the food industry, even less R&D is carried out for product innovations. The scenario is even worse for chilled and frozen food, where key chilling and freezing facilities are neither readily available nor allocated for R&D.

For Malaysia to become a major player in chilled and frozen food, particularly in ethnic foods, R&D into new products and product improvements and extensions have to be actively pursued to meet the increasing demands of consumers, both local and export markets'.

Innovative product and technology development will be one of the key success factors for the chilled and frozen food industry in the future. R&D would help the industry produce higher value-added products that could compete with fresh food, which is currently easily available.

c) Consumer Acceptance, Perception, and Awareness

Frozen food is perceived as inferior in quality than the freshly prepared products. There is a lack of appreciation of the quality parameters of chilled and frozen food as Malaysians are, generally, not as discerning as those in the West. In addition, there is lack of awareness on proper handling of chilled and frozen food.

d) Cold Chain

Apart from processors, the chilled and frozen food business depends also on other players in the cold chain to ensure the chain is not broken at any stage, thus, securing product quality and safety to the end user. The following are issues that need to be addressed:

- Transporters, cold room operators, and retailers' general lack of knowledge in handling chilled and frozen food may lead to poorer food quality.
- Equipment should be properly maintained and calibrated, including cold rooms, cold trucks, and display cabinets.
- Properly designed facilities should be available for loading and unloading of chilled and frozen food. With the exception of a few big players, such facilities are not available.
- Poor practices, particularly during loading and unloading lead to temperature abuses and breakdown in the cold chain.
- Local fabricators of cold rooms and cold trucks sometimes use inferior materials that are off-specification. The use of low-grade panels in the long run degrades cooling efficiency and quality of the products stored/transported.

d) Cold Chain (continued)

- The lack of technology and know-how in building modern and sophisticated cold stores which are far behind international standards, creates a huge gap in quality output from the food manufacturers and cold store operators.
- The unreliable and unmonitored service and quality level of certain cold truck operators means that manufacturer have to buy their own trucks. This is a hindrance to smaller manufacturers whose trade volume does not justify owning cold trucks. Furthermore, cost of cold trucks is far too high for small manufacturers.
- Lack of sufficient cold trucks operating networks outside of the Klang Valley.
- The need for Government involvement to set-up industrial associations to promote greater cooperation with support service providers.

e) Human Resources

The industry is not adequately using trained manpower that is available in the country. Five of Malaysia's universities currently produce about 450 graduates per year in Food Science and Technology, but only few are employed in larger establishments. It is particularly important to have some degree of expertise within the establishment for this sector to gain compliance to international food quality and safety standards.

However there is a shortage of workers in the sector in view of the nature of the operation (cold and sometimes wet environment). The situation is made worse if chilled and frozen establishment is located close to other establishments competing for limited manpower.

The employment of foreign workers may pose additional problems related to personal hygiene and communication affecting the production and handling of quality and safe foods.

f) Legislative and institutional

Local food manufacturers are having difficulties meeting the stringent international food regulatory standards and the requirements of big buyers from importing countries.

There is a lack of an organisation to specifically spearhead the development of the industry and co-ordinate efforts of the industry players. Currently, the industry players are working independently in exploring the markets and conducting R&D, and are not aware of the availability of services or products that could help them in their operations.

g) Impact of Globalisation

With the advent of AFTA, WTO and global liberalisation of trade, Malaysian chilled and frozen food manufacturer will have to face greater competition both locally and internationally. The industry survey indicates that generally the industry in Malaysia is in the infancy stage and may not be able to compete internationally unless the industry improve its issues identified in the Report.

8.2.2 Sector Specific Issues

The following are specific issues of the 4 categories of chilled and frozen food:

a) Ready-to-Serve Meals and Snacks

Currently, there has been very limited scope for the chilled and frozen ready-to-serve meals sector as reflected in the few number of rather small players. It is envisaged that the main players in the local snacks manufacturing sector will expand into ready-to-serve meals due to the use of similar technology and production facilities. Issues related to chilled and frozen snacks, therefore, will also apply to complete meals. The following lists some of the issues:

(1) Design of Manufacturing Premise and GMP

Many factories producing frozen local snacks are operating from shop lots and do not have the proper design in terms of zoning for hygienic operations. The operators lack training and understanding of the hygiene requirements related to chilled and frozen food.

Meeting the hygiene standards and complying with GMP and Food Safety requirements (HACCP) will be a great challenge to this sector of the food industry. This will involve upgrading the establishment to comply with the international standards (GMP & HACCP), which some key players are planning to do. Without upgrading and complying with hygienic practices, it will be difficult for the current snack manufacturers to compete in the export markets and be able to sell their products in well known supermarkets and other retail outlets.

(2) Product Development

Many of the snacks and ready meals products have been developed on a trial and error basis by the manufacturers themselves rather than based on a rigorous scientific R&D. While these products are acceptable to current consumers, they may not be acceptable in the near future, as consumers become more discerning. For the local snacks and meals segments, research work in other countries have limited application in Malaysia due to differences in recipe, consumer taste and type of ingredients used.

(3) Competition from Non-Chilled and Frozen Foods

Local chilled and frozen snacks and ready meals will always have to compete with similar products, which are freshly prepared, particularly in the local market. Therefore the challenge faced by manufacturers is to be able to produce chilled and frozen snacks and ready meals that have similar eating qualities as freshly prepared foods with emphasis on convenience.

(4) Lack of Experience in Proper Central Kitchen Operation

One of the potential developments of complete meals and snacks is the central kitchen operation, however, systematic central kitchen operation is relatively new in Malaysia. It requires big investments in equipment and production system (e.g. cook-chilled) to achieve the safety standard that the industry expects.

b) Food Ingredients and Vegetables

Very few players are in this category of chilled and frozen food ingredients. About 60 percent of vegetables imported are in chilled and frozen forms used by food service establishments such as fast food outlets, or for conversion to value-added products by manufacturers, including those manufacturers of snacks such as buns, *samosa*, and spring rolls.

As to local vegetables, the few big players in food catering establishment such MAS Catering, KLAS, and Sajibumi have expressed the need for minimally processed local ingredients and vegetables.

These minimally-processed ingredients and vegetables will add value to the larger food catering establishments and institutions in terms of productivity, quality and hygiene. The reluctance of local players to go into commercial production of these products could be attributed again to availability and cost of these vegetables. In addition, Malaysian farmers are traditionally supplying their vegetables to wet markets, and some supermarket chains, and only a handful supply to industries.

c) Chilled and Frozen Meat and Seafood

The followings are issues related to chilled and frozen meat and seafood:

(1) Chilled and Frozen Poultry Products

This sector is equally well established with many big players involved, using high technology machinery and production systems which enable them to compete successfully with imports from US, Holland and Denmark. A key issue in this sector for small players is the cost of raw material (corn, fish meal) for the production of animal feed. Currently almost all of the raw materials needed are imported.

While the local market for chilled and frozen poultry products appear to be thriving, export of these products are limited. To date, because of strict safety and quality requirements, only three manufacturers are allowed to export their products into Singapore. It will be a challenge for other players in this sector to upgrade their overall operation to enable them to export their products to Singapore and to other developed countries.

(2) Chilled and Frozen Meat Products (Beef, Lamb)

Most manufacturers are in the SMI category and almost 98% of the value-added products (VAP) are for local consumption. Most manufacturers use imported Indian buffalo meat except for Prima Agri and Puteri Pan Pacific. The use of Indian meat makes it difficult for VAP to be exported. The challenge is to import higher quality meat from reputable sources such as from Australia and convert them into premium VAP that can compete in the overseas markets. In addition, to be a serious player, a manufacturer of this category must achieve HACCP status and obtain the Veterinary Logo.

(3) Chilled and Frozen Pork Products

In this category, there are a few major players of SMI status. For the local market, sales of products are restricted to special designated section and counters at retail outlets. The halal factor is overshadowing the growth of this sector. The recent JE outbreak incident compounded problems to export these products.

(4) Chilled and Frozen Seafood

This sector is well established, and is characterised by the participation of relatively big players. Their products are mainly exported. Many manufacturers have obtained EU number and/or HACCP status, which enable them to penetrate overseas markets.

The key issue facing the sector is the availability of raw material such as prawns and other seafood. Local manufacturers have to compete with Thailand for raw materials produced locally and in the region. While Malaysia produces small quantities of *surimi*, local manufacturers of value-added products rely on imported *surimi*, reputed to be of higher quality.

One of the challenges to this sector of the industry is to produce quality local products that could withstand the freezing process and distribution throughout the whole cold chain.

At present, Malaysian exporters of chilled and frozen seafood enjoy preferential treatment in Europe. If this is removed, it will be a challenge for the local players to compete with Thailand, one of the biggest manufacturers of seafood.

8.3 Key Challenges and Issues Identified for Halal Food Hub

Malaysia, being a respected Muslim country, is in a good position to establish itself as the main supplier of halal foods and tap into the growing world market. There is, however, an urgent need to address many technical and practical aspects affecting the production of foods for the growing halal market, especially with non-conventional ingredients. There must be sufficient monitoring and quick decision-making by authorities to prevent consumer dissatisfaction and confusion.

Malaysia aspires to become the hub for the production and marketing of halal products. There are various agencies involved in crystallising the "Malaysian Halal Food Hub" concept, such as MOA, DVS, JAKIM, MATRADE, and MIDA. These agencies' efforts are not concerted and lack a common vision, e.g. determining what the halal food hub should look like.

To be recognised as a "hub", the "hub" must also produce vast product ranges of all types of food, not only chilled and frozen food and undertake various related activities. Taking this into consideration, authorities should revisit the following strategic issues:

- *What is Halal Food Hub?*
- *What to hub? Do we hub the production, certification, or distribution centers, or the entire value chain?*

We have outlined some points (see Chart 8.1 and Chart 8.2) pertaining to the above-mentioned strategic questions for further consideration. As such, it is not appropriate to discuss the halal food hub within the scope of chilled and frozen food only.

As such, it is not appropriate to discuss the halal food hub within the scope of chilled and frozen food only. Nevertheless, we have identified the following issues related to the production and marketing of halal food:

a) Production and Distribution

- The major weakness for Malaysia is the lack of local raw materials to produce large quantity of frozen and chilled food products. Presently, local livestock and meat production is relatively small and unable to meet the increasing domestic demand. Malaysia needs to increase its current imports from Australia, New Zealand, the US, EU, and India if it wants to become the halal food centre.
- It is a great challenge to establish a comprehensive guideline and monitoring system for the production of halal food, which incorporates both GMP and Syariah law. In addition, the product has to be "halal" throughout the chain.

b) Technology and R&D

- Scientific advances, such as using genetic engineering in food production, pose a great challenge to halal certification, in terms of halal interpretation and to verify if the genes are from prohibited animals.
- There is a need to address the many technical and practical aspects of halal food production, especially in the use of non-conventional ingredients. Research and development will play a very important role in future to help food producers verify the technical aspects of halal certification of food ingredients, processes, and packaging materials.

Chart 8.1 What is possibly this Hub? An Example...

	A Centre	Financial	Product	Process	Suppliers	Producers
Characteristics	A platform providing connectivity services to all parties involved in the hub, such as B2B and B2C portal etc.	The hub must be able to generate significant financial benefits to justify the need of its existence, eg in terms of market value / revenues.	Offer a broad range of halal food that are demanded by the consumers	The hub hosts various types of value adding Processes, i.e. Production, processing, warehousing, distribution & R&D. In addition, these processes need to be compliant with the necessary procedures and regulatory requirements i.e halal audit and certification.	There must be sufficient number of suppliers to provide inputs to the producers operating in the halal food hub.	The Halal hub has to be driven by a few mega players, especially in the initial stage, to produce big quantity of supplies and variety of halal food.
Vision	To establish an E-commerce platform for the hub To centralise halal food administration	To be export oriented More & regular promotions	1. Potential products: - meat based - animal fat - alcohol free - composite products eg meals, snacks etc - food ingredients & processing aids	All processes need to be certified halal and compliant with international food standard i.e GMP, GHP & HACCP To standardise halal certification and logo in Malaysia To review policy on halal certification fee to be more reasonable	To attract companies to set up a based in the Hub and bring in raw materials from targeted countries. Target countries: Vietnam, Thailand, Australia, Japan, Indonesia, Europe	To be a centre with mega producers (5 multi-national companies) in <ul style="list-style-type: none"> • Production of halal food; and • Halal ingredients / semi-processed food

Chart 8.1 What is possibly this Hub? An Example...

Component of the hub	A Centre	Financial	Products	Process	Suppliers	Producers
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Chart 8.2: What Kind of Hub? An Example...

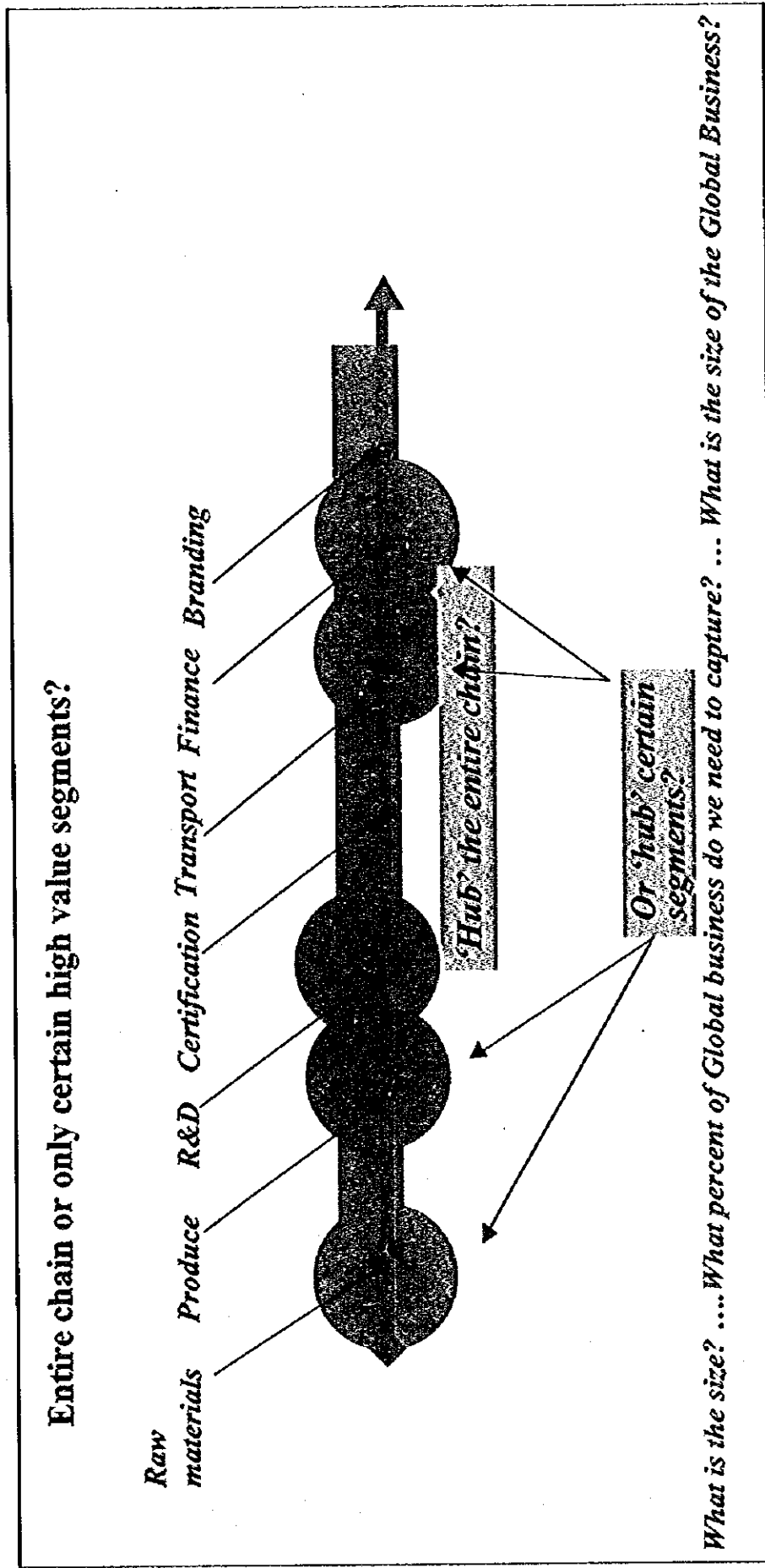
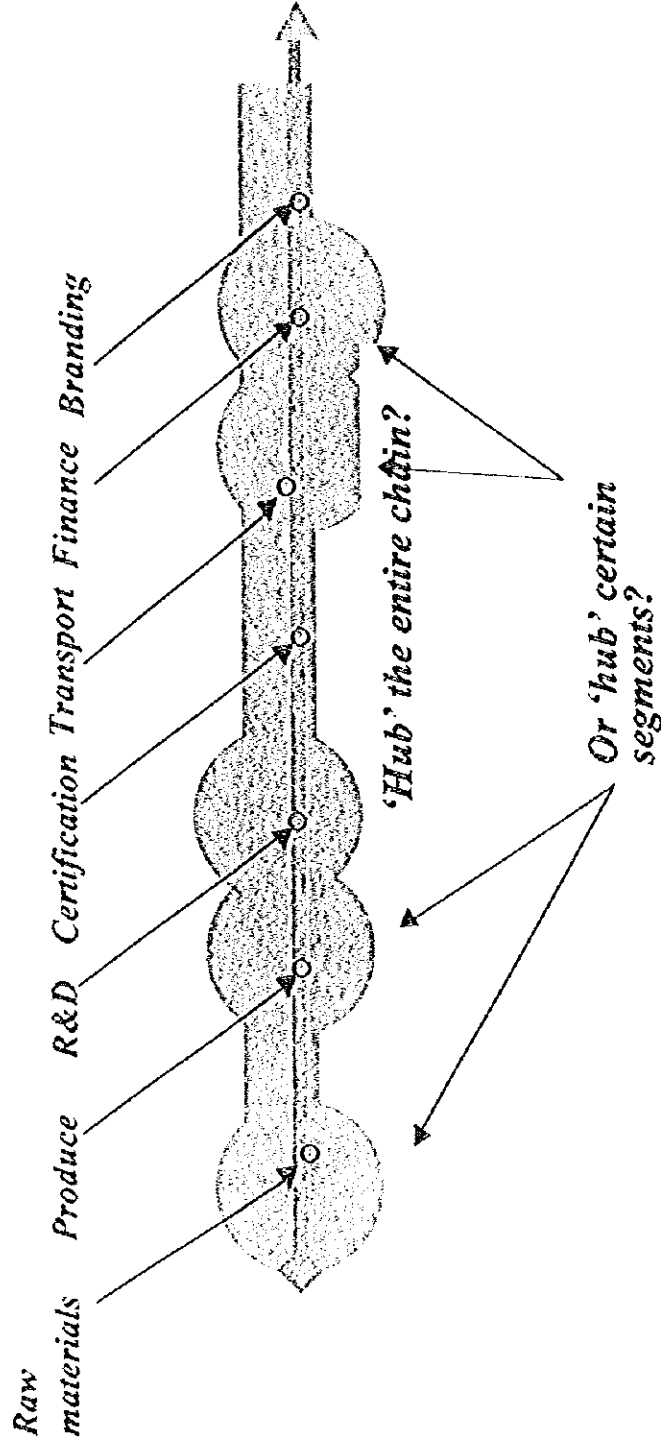


Chart 8.2: What Kind of Hub? An Example...

Entire chain or only certain high value segments?



What is the size? What percent of Global business do we need to capture? ... What is the size of the Global Business?

c) Legislation and Institutional

- There is a lack of linkages among Government agencies in solving problems and in implementing strategies for halal food production. The leading agencies such as MOA and MATRADE are perceived by industry sources to be moving at a very slow pace. Even though the subject of positioning Malaysia as hub for halal food is clearly stated in NAP3 and IMP2, to date, however, only a strategic plan has been formulated. There are no clear and concrete action plans yet, according to a MOA official, due to the lack of manpower and resources.
- There is no regulation on making the halal production mandatory. This has restricted the enforcement of the regulation on halal and the monitoring and control of halal expression and marking since halal is just a voluntary exercise to the manufacturer.
- There is no legal requirement for mandatory compliance of halal, except that it should conform to the Trade Description (use of expression of "Halal") Order 1975.
- Presently, there are many logos for halal products in the country. Standardisation of these various logos is necessary for uniformity and to avoid confusion among consumers.
- JAKIM halal logo and certificate are highly recognised internationally. However, the impact of privatisation and fee structure for halal certification could become a factor discouraging the expansion and further growth of halal food market especially among SMI's.
- At present, there is insufficient supportive infrastructure, such as accredited laboratories for halal auditing work.

d) Consumers Education

- The certifying bodies are not totally committed to educate the public on halal requirements.

e) International Trade

- The Sanitary and Phytosanitary Measures under the WTO require that any measure that may affect international trade, "must not be stricter than necessary for the protection of human health, must be based on scientific principal, and must not be maintained without sufficient evidence". These specifications do not include halal principal.
- There is no international standard guideline on halal certification. The halal certification systems may be different, depending on the countries, location, demand, and manpower situation. The main reason for such proliferation of halal standards is due to different interpretation of halal requirements according to Syariah Law. This may confuse the consumers to perceive that all halal certified food is "equally halal".
- On the other hand, standardisation of Halal logo in Asean region may result in Malaysia losing the prestigious "Malaysian Halal" logo and losing the competitive advantage.
- Malaysia has established credibility in halal food production with its strict and proper halal guidelines. Halal products provide a competitive edge over similar product, however, there is very little promotion on Malaysian halal food internationally. Malaysia needs to capitalise on this opportunity in a more aggressive manner. However, MATRADE's has no strong and clear promotional plans for halal food. The agency is only promoting Malaysia's brand names in general for international trade but not specifically Malaysian halal products.

8.4 The Need for Intervention / Government Action

The following are main reasons for government intervention in the chilled and frozen food industry:

a) Interventions required to achieve projected market potential

For the local market to achieve the RM6.0 billion forecast by 2010, there is a need to at least undertake similar types of interventions as done by the Japanese Government in the 1970s otherwise the market potential of RM6.0 billion may not be realised. This is because the market projection is based on the Japanese growth model.

b) Economic benefit from developing selected segments

The rising demands for ethnic foods in developed countries offer opportunities to Malaysian manufacturers of chilled and frozen food. Some Malaysian companies are already trying to penetrate this segment of the global market. By assisting these companies to grow, to meet the challenges of penetrating these markets, and to encourage other Malaysian companies to enter these markets, would result in economic for Malaysia. Exports will also assist in reducing the food bill deficit.

c) Food safety aspects

The increasing consumption of chilled and frozen food will place heavier demand on the already fragile cold chain. If the cold chain is not developed fully, the citizens' health would be effected by the breakage in the cold chain, which may result in food poisoning and adverse impact on the nation's productivity.

It is important, therefore, that the Government intervenes and develops the cold chain to meet the projected market size of chilled and frozen food.

d) Food security aspects

Due to reasons beyond the control of the authorities, Malaysia is a net importer of food and is expected to remain so for the foreseeable future. While we will remain as a net importer of food in the immediate future, we can try to reduce the deficit by increasing exports, reducing imports and relying more on local production. The Government, especially the MOA, is undertaking various measures to achieve these objectives, with varying degrees of success.

Within the scope of this study, the Government's efforts can be complimented by reducing wastage due to spoilage of food products during storage and transportation. No accurate figures are available, but various industry sources indicate 10 - 30 percent of agricultural produces are wasted due to spoilage. This can be reduced by fully developing and implementing the cold chain, which in turn reduces wastage and assists the Government's effort to reduce the annual food bill deficit, as well as improve the nation's overall food security.