

Chapter III

DOMESTIC DEMAND FOR EDIBLE OILS AND THE EDIBLE OIL INDUSTRY

In the present Chapter, Section I discusses the Domestic Demand for Edible Oils in the Country. Section II outlines the basic features of Edible Oil Industry and Section III makes some concluding observations.

I

Domestic Demand for Edible Oils

Dietary fats are an essential component of food basket along with carbohydrates and proteins vital for proper functioning of human body and mind. Edible oils constitute an important component of Indian households' expenditure on food. According to NSS 63rd Round average monthly per capita consumption expenditure (MPCE) on non cereals including edible oils has risen from 61% in 1993-94 to 68% in 2006-07 for rural areas and from 71% to 77% in the same period in the urban areas (Agriculture Statistics At a Glance, 2010). Department of Food and Public Distribution arrives at the total domestic consumption figure for all edible oils by putting together, the annual domestic production and import figures. In 2009-10 this was reported at 18 million tonnes (Appendix Table I).

With an annual consumption of about 18 million Tonnes, the per capita consumption is at 15 kgs, which is still low compared to world average of 20 kgs. China is currently at 17 kgs. The per capita figure includes not only household's cooking oil consumption but also their derived demand for oil

from consumption of processed products, and food from commercial establishments. The break-up of direct and derived demand for edible oil is not available. However, as per industry sources, significant increase in demand is for refined oils from institutional sources like food processing industries and commercial establishments like hotels, restaurants etc. Therefore, the annual consumption also includes derived demand of households for refined and hydrogenated edible oils. This might explain the rapid increase in the demand for palm oil which has excellent property of blending easily with any oil and is also used for conversion into vanaspati, by hydrogenation. Besides, edible oil requirements in India have to be met entirely from vegetable sources. In fact, India is the biggest consumer of vegetable oils and the hydrogenated fats consumed here are also sourced from vegetable oils. Detailed data for this derived demand originating from commercial establishments and food processing industries are not readily available. With rising incomes and GDP growth, as well as, the accompanying influence of Engel's law, the demand for edible oils, along with that for proteins is increasing. This rise in demand is also attributable particularly to large segments of the upwardly mobile poorer strata of society who are increasingly becoming conscious of health and nutritional needs and have justifiable expectations regarding a higher quality of life. Thus the demand is not likely to come down anytime soon. A large part of our population could not afford earlier to buy the nutritionally required quantities of food grains because of the lack of purchasing power. With the impressive GDP growth in the recent years resulting in increased purchasing power, coupled with ever increasing population, the demand for all kinds of food articles has gone up.

Very few studies have focused on Indian edible oil demand analysis (Pan, Suwen et.al, 2008). Knowledge of demand structure and consumer behaviour is essential for a wide range of development policy questions like improvement in nutritional status, food subsidy, sectoral and macro economic policy analysis, etc. (Mittal, Surabhi, 2006). In a recent article in the Indian Express dated 12th February, 2010, Prof Y.K. Alagh has also emphasized that the real issue is that poor Indians now have a very low propensity to demand food grains. In the article, he mentions his earlier study on demand estimation for rich and poor in rural and urban areas in which it was established that income growth by 1% led to demand for consumption of grain by 0.46 now as compared to 1.82 for rice and 0.88 for wheat in the past reference period. Interestingly, he has pointed out that income of the poor can go up due to the implementation of National Rural Employment Guarantee Act (NREGA) and Right to Food Security Act and the income growth would lead to growth of other diversified basket of food items.

In a study by Ramesh Chand (2003), it was pointed out that estimates on demand projections for food take a narrow view of food security by looking at the availability of only rice and wheat which creates an erroneous impression about food security. If the concept of food is taken in a proper and broad sense including fruits, vegetables, animal products etc. the demand scenario may be entirely different compared to the one which equates food to grain alone. In his paper he quotes demand projections for food towards 2020. One estimate is based on the study published by IFPRI, Washington and the other by IARI, New Delhi. The results differ due to wide divergence in elasticity estimates used by the two studies in making demand projections.

Thus according to the IARI study, direct demand for cereals would rise only on account of increase in population, whereas, IFPRI study reported a large increase in demand due to growth in income in addition to the impact of population growth. According to IARI study any increase in per capita income of Indian Population would result in a small decline in direct consumption of cereals and a modest to high growth in demand for livestock products, fruits and vegetables. The IARI study is based on negative income elasticity of cereal demand-implying reduction in demand for cereals with increase in income. Growth predicted by the IARI study is found appropriate by the author and using elasticity in this study, Chand (2003) proposed growth rate of 2.9% for 1999-2020 period as against output growth of 2.06% in 1993-2003 for edible oils.

The edible oil consumed by households primarily include groundnut, coconut, rape, mustard, soybean and sunflower oil. India is a vast country and inhabitants of several of its regions have developed specific preference for certain oils largely depending upon the oils available in the region. For example, people in the South and West prefer groundnut oil while those in the East and North use mustard/rapeseed oil. Likewise, several pockets in the South have a preference for coconut and sesame oil. Vanaspati, a term used to denote a partially hydrogenated edible oil mixture is popular in the lower strata of population in Northern states. Edible Oils and vanaspati are used as cooking media (in households, hotels, restaurants, canteens, institutions, food processors) and vanaspati is also used as an industrial input(bakery shortening) - for making bakery products and confectionery. Wholesale/branded retail sale for soybean, sunflower and mustard oil has also risen

recently due to rising awareness/health consciousness. Important secondary sources besides oilseeds include coconut, cottonseed and rice bran oil. Cottonseed and rice bran oil are used for blending. The share of raw oil, refined oil and vanaspati in the total edible oil market is estimated at 35%, 55% and 10% respectively.

What is of concern is that the demand for edible oils has moved into a high growth trajectory surging ahead of the domestic availability in the last few years in an alarming manner. There is year to year fluctuation in domestic availability and consumption. It is evident from the table below and the chart plotted with the help of the data, that over the period 1990-91 to 2009-10 the domestic consumption net of exports has been growing at 6%, against a 2% growth in domestic availability of edible oils from oilseeds and secondary sources like rice bran oil.

Table III.1: Domestic Availability and Consumption of Edible Oils

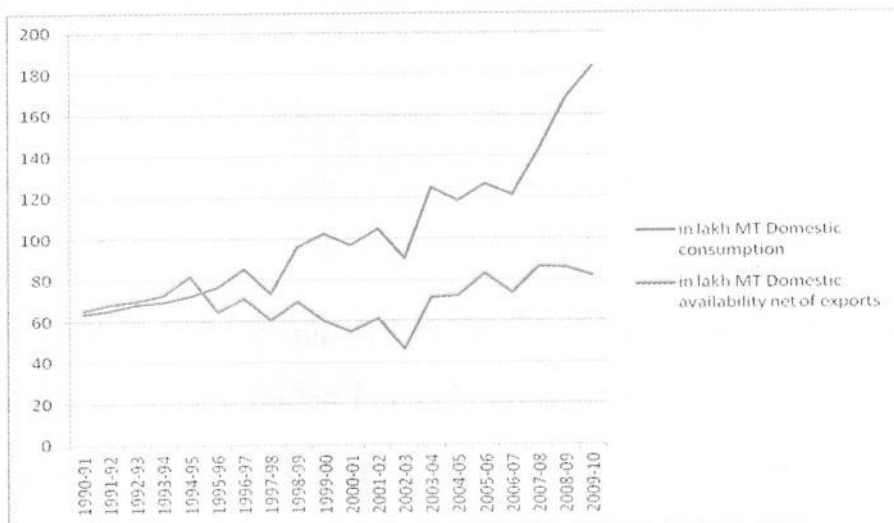
Year	Domestic consumption	in lakh mt		
		Year on year growth	Domestic availability net of exports	Year on year growth
1990-91	63.60		65.50	
1991-92	64.90	2.04	68.30	4.27
1992-93	68.10	4.93	70.10	2.64
1993-94	69.30	1.76	72.60	3.57
1994-95	71.90	3.75	81.90	12.81
1995-96	76.29	6.11	64.68	-21.03
1996-97	85.33	11.85	71.27	10.19
1997-98	73.24	-14.17	60.58	-15.00
1998-99	95.82	30.83	69.60	14.89
1999-00	102.11	6.56	60.15	-13.58
2000-01	96.76	-5.24	54.99	-8.58
2001-02	104.68	8.19	61.46	11.77
2002-03	90.29	-13.75	46.64	-24.11

2003-04	124.30	37.67	71.40	53.09
2004-05	117.89	-5.16	72.47	1.50
2005-06	126.04	6.91	83.16	14.75
2006-07	120.85	-4.12	73.70	-11.38
2007-08	142.62	18.01	86.54	17.42
2008-09	167.81	17.66	85.98	-0.65
2009-10	183.00	9.05	82.00	-4.63
Average annual growth rate		6.15		2.40

* Net of exports after 1995-96

Source: Solvent Extractor's Association and Agricultural Statistics At A Glance, Department of Agriculture & Cooperation, (2010)

Chart III.1 Trends in Edible Oil Consumption and Domestic Availability (1990-91 to 2009-10, lakh MTs)



Source: Based on Table III.1

Following may drive further the future demand for edible oils:

- Macroeconomic factors: Population growth, per capita income, purchasing power, Increase in per capita consumption of edible oils with rise in income and notable
- increase in institutional consumption and middle class of the society

- Influence of branded products - 'health' message
- Growing preference for convenience foods.
- Govt. schemes like mid-day meals, subsidized oil and NREGA also boosted the demand for edible oils
- nutritional labelling based on established health risks of edible oils

As per the Solvent Extractor's Association calculations, considering population growth rate of 1.8 percent (close to 20 million additions every year) and income increases through economic growth (assuming an average of 8.5 percent a year), consumption demand for vegetable oil is set to expand on an average by 6-7 percent in the next five years. This translates to roughly 700,000 to 800,000 tons of additional demand every year. Currently, India's total vegetable oil consumption demand at 4% growth rate is slated to reach 15.6 million tons by 2010 and further up to 20.8 million tons by 2015; and at 6% growth rate, it will be about 25 million tons by 2015. With this kind of demand foreseen and inability in meeting the requirements domestically, the sustainability of present import trends is questionable and appropriate policy measures are required to step up domestic production and productivity. Excess demand situation which is dependent on imports is susceptible to stock hoarding as well as adulteration. Besides it is established that the excessive consumption of oils is associated with health risks. Based on this norms have been fixed for appropriate mix of saturated, unsaturated and hydrogenated fats with prescribed safe limits for minimum daily intake. Ministry of Health and Family Welfare had on September 19, 2008 notified Prevention of Food Adulteration Rules, mandating packaged food

manufacturers to declare on their product label, nutritional information to enable consumers to make informed choices. There is a further need to educate the consumers about the various rules and regulations that regulate nutritional labelling, health messages and legislations that protect Consumers Rights, prevent Black Marketing, Hoarding etc.

Table III.2 India's Population & Consumption of Edible Oil

Year	Population @ 1.8% Growth	Consumption @ 4% Growth		Consumption @ 5% Growth		Consumption @ 6% Growth	
	In Bn.	Per Capita Kgs.	Mn. T	Per Capita Kgs.	Mn. T	Per Capita Kgs.	Mn. T
2009	1.19	12.37	14.75	12.73	15.18	13.10	15.61
2010	1.21	12.87	15.61	13.37	16.22	13.89	16.85
2011	1.24	13.38	16.53	14.04	17.34	14.72	18.18
2012	1.26	13.92	17.50	14.74	18.53	15.60	19.62
2013	1.28	14.48	18.53	15.48	19.81	16.54	21.17
2014	1.30	15.05	19.62	16.25	21.18	17.53	22.84
2015	1.33	15.66	20.77	17.06	22.63	18.58	24.65

Source: SEA, Mumbai

II

Edible Oil Industry in India and Edible Oil Demand

India's oilseeds processing sector is made up of Ghanis, solvent extractors and oil refiners engaged separately. Broadly, edible oil/fat products can be categorised into vegetable refined oil, hydrogenated oil (vanaspati), bakery fats/margarine, and de-oiled cakes.

As per industry sources, oil mills crush oil seeds and extract oil, 70% of which is sold in the open market. The remaining 30% is refined and sold as branded oil. After the extraction of oil, residual seeds are processed further by

solvent extractors, to make solvent-extracted oil. Most of the solvent extracted oil is used to make 'vanaspati'. The Indian edible oil industry is highly fragmented with a large number of small scale producers. The ghanis belong to the SSI segment and usually serve the rural markets. Small scale expellers, much like the ghanis, use metal screws to press or expel oil from seeds. However, they are larger than the ghanis, oil expelling capacity being in the range of 5-10 tonnes per day, compared to around 50-60 kilos a day for ghanis.

Solvent extractors belong to the organised segment and are also the second largest after the SSI segment, in the domestic edible oil industry. They use modern technology to process low oil & high meal seeds (eg. soyabean, cottonseed) into edible oil and de-oiled cake. Oil refining also belongs to the organised sector and has recorded rapid growth in recent times. Refiners generally refine both expeller oils and solvent extracted oils. Vanaspati is made by hydrogenation of refined oil to vegetable shortening or spread and is similar to the milk product ghee and absorbs around 10% of the total edible oil supply in India. Due to increased consumer preference for non traditional oils such as soybean and sunflower oil, the organised sector has emerged as one of the fastest growing sectors in recent times clocking double digit growth. Branded products, though small portion of the total edible oils market, have been one of the main drivers of rapid growth. The edible oil industry is far from efficient and is not able to use its capacity to the fullest due to shortages and unpredictability of domestic raw material supply, uncertainty in policy and International economic environment etc. Although there is shortage of

oilseeds, the same are not imported for refining. Due to duty regime (30%) and regulatory EXIM policy for seeds (plant quarantine conditions etc.) in place, it is far more easier to import crude/refined oils. It is usually the crude oil which is imported and refined. For this purpose, crude palm oil and soybean oils are imported. To protect the domestic refining industry, duty differential of 7.5 % is kept between crude and refined oils. One of the major products of refining is production of de oiled cakes which are exported to countries which use it as animal feed. Oilseeds crushing units include crushing units in the small-scale sector as also in the organised sector. The capacity utilisation generally ranges from an average of 10% for the ghanis (small scale sector) to around 30% in case of the expellers in the organized sector. The Fragmented small scale sector mills use locally grown oilseeds, whereas the larger units some of which are close to ports have come to rely on imported crude oil for processing.

III

Chapter Summary

Therefore in this chapter we have seen that due to rise in income, population the demand for edible oils has increased. The demand is not restricted to the rich or middle class sections of the society. Poor strata also contribute to this demand. Besides there has been a rapid increase in institutional; demand from food processing industries, commercial Establishment etc. The demand is growing for branded oils perceived to be less harmful and also mass consumption refined oil.

The domestic industry has organized itself around the diversified use of oilseeds, i.e. crushing for oil, oilcakes and finishing of exportable oilseeds. However, they are far from efficient and suffer from excess capacity due to erratic and deficient supply of oilseeds and unstable policy environment as well as global uncertainties. The industry has also come to rely on imported crude oils for its raw material requirements. The domestic consumption has risen by 6% annual average rate in the last twenty years and the projected requirement for edible oil is 24.5 million tonnes by 2015 as against that for 2009-10 at 18 million tonnes. The sustainability of present import trends is questionable and needs to be addressed. When demand is met through imports, the domestic prices get aligned to international prices which are volatile and transmit the global uncertainties.

With freer imports the link between farmers and traders is weakened and ease of availability of oil and cheap price becomes the deciding factor. The import is largely restricted to crude palm oil which is not produced domestically in spite of policy push since early 1990s. Factors like its lower price, logistical advantages, contractual flexibilities, and consumer acceptance have been identified for its popularity (Pan Suwen et. al., 2008). It is very important to understand the demand structure, estimations and projections for various oils for a choice of appropriate product mix for promoting domestically. There is a further need to educate the consumers about the various rules and regulations that regulate nutritional labelling, health messages and legislations that protect Consumers Rights, prevent Black Marketing, Hoarding etc. Besides, it is necessary to enforce the legislations for strict compliance.