
Chickpea Marketing in India: Challenges and Opportunities

Frank W. Agbola ¹, Timothy G. Kelley ², Martin J. Bent ³ and P. Parthasarathy Rao ⁴

Abstract

India's food economy has undergone fundamental changes in the 1990s. As part of these reforms the chickpea industry is being transformed into a market-oriented sector through the process of liberalisation. Despite these reforms, the state governments in India government still levies whole chickpea export and the Government of India continues to set minimum price for chickpea and limit the volume of chickpea exports. These policy reforms are likely to impact on world chickpea trade. This study provides an overview of chickpea marketing in order to assess the potential problems and opportunities for increasing chickpea exports to India. The survey results suggest possible opportunities for expanding chickpea exports to India. It was found that the factors reshaping chickpea trade are the quality characteristics and purity standards of chickpea, government macroeconomic policy and chickpea supply and demand dynamics. The policy implications of the findings for Australia are discussed.

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Key words: India, chickpea, government intervention, market segmentation, market survey

1 Introduction

India is the second most populated country in the world with an estimated population of over 1.0 billion. In Purchasing Power Parity terms, the World Bank rates India as the fifth largest economy in the world and projected that by 2020 it would be fourth behind China, US and Japan. India is predominantly an agricultural country with agriculture contributing about 32 percent of Gross Domestic Product and employing 66 percent of the work force. Seventy-four percent of the population live in rural areas (DFAT, 1998). With temperate to tropical climate, India suffers regularly from extensive droughts, famine and floods. Since the Green Revolution of the late 1970s, India has moved toward self-sufficiency in food production.

India is experiencing fundamental economic and social transformation. Before 1990, access to India's chickpea market was restricted by trade restrictions that have been in place for almost forty years for balance of payment reasons. Tariff rates on agricultural imports varied from 40 to 100 percent. Coupled with this was the complex licensing system for imports (Kelley, 1999).

These policies have reduced the importance of the price mechanism in the chickpea market. In the last decade, the Government of India (GOI) embarked on a policy of economic liberalization, backed by the International Monetary Fund.

The stringent controls on imports and industrial licensing were gradually relaxed, stimulating industrial growth and reduction in the level of unemployment. In addition, the GOI expanded anti-poverty schemes, especially rural employment schemes. These policies have resulted in substantial income and price changes. Consequently, this led to a dramatic growth in demand for food.

Chickpea, along with rice, wheat and other pulses, are important ingredients in the Indian diet. Approximately 25 percent of Indians are vegetarians, and India is the world's largest consumer and producer of chickpea.

The policy reforms of the 1990s have had significant effects on agricultural production and demand for food in India. For example, the

demand for pulses, especially chickpea, began to weaken relative to the demand for other food groups. The literature attributes these events to changing relative prices of food items, changing tastes and preferences and changing economic conditions (Gulati, 1998; Kelley, 1999). The changes in tastes and preferences engendered by urbanization and economic growth have given consumers greater freedom and alternatives in their consumption decisions.

Given that India is the largest chickpea producing and importing country in the world, the changes in India's agricultural sector could have a profound impact on international chickpea trade and important implications for exporting countries. India's policy towards a more market-oriented system opens opportunities for existing and potential chickpea exporters.

To compete in a competitive chickpea market, more must be known about the factors affecting consumer demand for chickpea in one of the most lucrative pulse markets in the world, the Indian chickpea market.

It is the growing interest of Australia's chickpea producers in the Indian market and the desire of policymakers to find ways to encourage chickpea export that motivated the research discussed in this paper.

At the end of a workshop on the Fundamentals of the Indian Sub-Continent Pulse Economy held at the University of Western Australia in 1999, the Grains Research Committee of Western Australia funded a collaborative research project between Muresk Institute of Agriculture (Curtin University of Technology) and the Socio-Economic Policy Program (SEPP), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) to quantify the value of quality characteristics of chickpea in India. The market survey conducted in May and September of 1999 forms the basis of the results discussed here.

The objective of this paper is to provide an overview of the Indian chickpea marketing system and the challenges and opportunities facing exporters of chickpea into India. This paper presents the results of semi-structured interviews conducted during visits to chickpea markets in India.

The rest of this paper is organised as follows. Section 2 describes the chickpea markets surveyed. Section 3 describes the India chickpea marketing system. Section 4 discusses segmentation in Indian chickpea market. Section 5 discusses the role of government in chickpea marketing and pricing in the Indian chickpea market. The concluding remarks and implications for Australia follow.

2 Study area

This study covered the major chickpea markets in India. Two types of markets were surveyed. These are terminal markets and primary/secondary markets. In terminal markets chickpea traded are mainly from major chickpea growing regions in India and from exporting countries.

The terminal markets surveyed included Calcutta, Chennai (Madras), Delhi and Mumbai (Bombay). Primary/secondary markets are those where the chickpea traded is mainly from domestic chickpea producing regions in India. The primary/secondary markets surveyed included Aurangabad, Bhopal, Indore, and Jalgaon. Figure 1 gives a picture of location of chickpea markets surveyed.

Figure 1: Location of chick pea markets surveyed

2.1 Terminal markets

Chennai

The Chennai chickpea market is located in the Tamil Nadu State of India. The soil and climate in this area are not suitable for chickpea production hence the Chennai chickpea market is the chief centre of chickpea distribution to the rest of the state. The Chennai market depends wholly on chickpea imported from major chickpea growing regions elsewhere in India and exporting countries through the Tuticorin port (about 200 kilometres from Chennai) or via the Mumbai port. An interesting feature of this market is that all of the split chickpea (dhal) consumed is processed outside the state. However, flour is processed locally. Chickpea is consumed mainly in the form of split chickpea. Chickpea is also consumed as roasted dhal, followed by flour, and whole chickpea, in that order.

Calcutta

The Calcutta chickpea market is located in eastern India in the West Bengal State. As in Chennai, the demand for chickpea is met through imports from primary/secondary markets and from exporting countries. Unlike Tamil Nadu, a large share of the dhal consumed is processed within Calcutta in small-scale dhal mills. Although chickpea is consumed as whole or puffed chickpea, the main use is as dhal, followed by flour and roasted chickpea (phutana), in that order.

Mumbai

The Mumbai chickpea market is the biggest centre for the consumption and trade of chickpea in India. It is located in the Maharashtra State of India. In this state, chickpea is consumed mainly as whole or roasted chickpea. Nearly 80 per cent of chickpea imported into India come through the Mumbai port. Chickpea demand in this state is met with imports from primary/secondary markets in major chickpea

growing regions in India. The Mumbai port is important in India's chickpea trade because of its connections to an excellent rail system. Chickpea is exported to other terminal and primary/secondary markets as whole or split chickpea.

Delhi

Delhi, like Mumbai, is a major centre for the consumption of chickpea in India. Chickpea is consumed mainly as whole or split chickpea. Unlike Mumbai, the Delhi market does not have direct access to chickpea imports and has to depend on Mumbai port and other primary/secondary markets for chickpea supplies. Processed chickpea from Delhi is exported to all states in India.

2.2 Primary/secondary markets

Indore

Among the selected primary/secondary markets, the Indore chickpea market in Madhya Pradesh State is by far the biggest and the most active trading centre. It is also one of the largest centres for processing desi chickpea into dhal in India. The main source of chickpea supply to the Indore market is from major growing regions of India. The method of sale is through auction where traders and millers bid for different lots. The Indore market is a leading price setter among primary/secondary chickpea markets.

Unlike chickpea in terminal market, the produce in these markets are of lower quality because they often contain foreign matter, broken and dead seed, immature seed, shrivelled seeds and damaged seeds, leading to price discounts. There are about 200 mills of varying sizes located in Indore. Split chickpea (dhal) produced from these mills is exported to a number of regions in India and, to a lesser extent, abroad.

Aurangabad, Jalgaon and Bhopal

The main source of chickpea supply to the other primary/secondary markets, Aurangabad, Jalgaon and Bhopal, are from farmers in the chickpea growing regions. Jalgaon and Bhopal chickpea markets are important dhal producing and exporting centres.

However, these markets are small compared to the Indore chickpea market. The advantage of Jalgaon over the other primary/secondary markets is that it is centrally located and well connected by rail to the major growing regions in India.

3 Chickpea marketing system in India

Market intermediaries in India play a key role in chickpea trade. The marketing system of chickpea in India is schematically shown in Figure 2.

About 95.0 percent of total chickpea traded in the Indian market is channelled from the main producing areas of Madhya Pradesh, Maharashtra, and Rajasthan to other parts of the country, with the remaining 5.0 percent imported by licensed importers from major chickpea exporting countries, namely, Australia, Mexico, Iran, Turkey, Tanzania, and Canada.

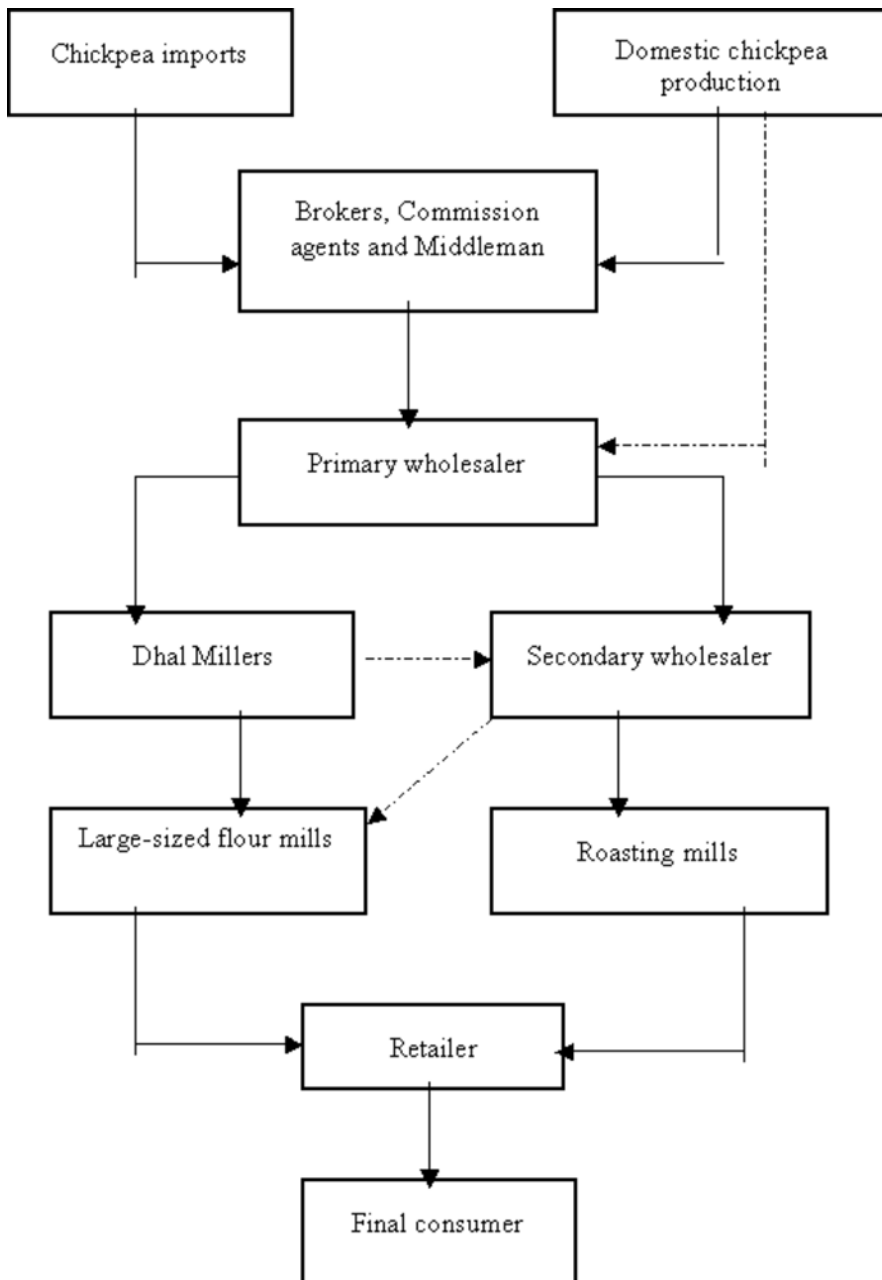
Chickpea imports are transported to other terminal and primary/secondary markets. The most commonly used transport is the rail system because it is about 25 percent cheaper than road transport. As direct connection by rail to major sale posts is not always available, road transport is used to convey chickpea to some terminal and primary/secondary chickpea markets.

Chickpea is sold in primary or secondary wholesale markets directly by the producer. Importers who are licensed to import chickpea into India sell directly to a broker, commission agent, middlemen or directly to a secondary wholesaler, miller or processor. The bulk of chickpea from brokers and commission agents are sold to primary wholesalers who in turn sell to millers and processors of dhal or to secondary wholesalers.

The majority of chickpea from the primary wholesalers go to millers and processors. Only a small quantity of whole chickpea moves from the primary market to the secondary market and reaches the consumer via the retailer. The dhal produced by the millers is sold to large mills or to secondary wholesalers. The flour moves to consumers via retail markets.

A proportion of the dhal from dhal millers and primary wholesalers goes to secondary wholesalers, and is then sold to consumers as dhal through the retailer. Whole chickpea from secondary wholesalers are sold to frying mills. Puffed or roasted chickpea move to consumers via retail markets.

Figure 2: Chickpea marketing channels in India - a schematic diagram



4 Product segmentation in Indian chickpea market

The Indian chickpea market is highly segmented. The demand for chickpea in each of these market segments depends largely on end use.

Four main segments were identified during the market survey:

- (i) the direct food use market;
- (ii) the split (dhal) market;
- (iii) the chickpea flour market;
- (iv) the roasted and puffed chickpea market.

4.1 The direct food use market

Chickpea is used predominantly for human consumption in India. Kabuli chickpea is mostly consumed as whole seed. It is either consumed separately or combined with other dishes. The market participants interviewed pointed out that imported kabuli chickpea is highly differentiated based on size into three main groupings: 7-8 mm; 8-9 mm; and 9 mm-and above. There are certain quality traits of kabuli chickpea that are mostly preferred by consumers. These are light yellow/cream colour, large and uniform size, good taste and thin seed coat.

Seed size, colour and good taste were thought to be the most preferred quality attributes followed by thin seed coat. It was noted that the Mexican kabuli chickpea is the number one choice, followed by Australia, Iran and Turkey, in that order. The Mexican kabuli chickpea is distinguished by its larger size, attracting a premium of about \$10 - \$100 per tonne. The Indian kabuli chickpea is of a smaller size and of

lower quality than imported varieties.

For desi chickpea, consumers prefer bright or golden yellow colour, soft and light seed, which tastes good. Imported chickpea are not considered suitable for direct food use because of the bitter taste. In the recent past, there has been an increase in demand for desi chickpea imported from Myanmar due to similar soil and climatic conditions that are thought to make the desi chickpea from Myanmar similar in taste to domestically produced Indian varieties.

4.2 The split (dhal) chickpea market

Desi chickpea is mostly consumed in split (dhal) form in India. The market surveys indicate that consumers prefer a desi-type that has a high recovery rate, is of uniform shape and large size and free from foreign matter. Millers assess the quality of desi chickpea by visually inspecting small samples from the lot. After de-hulling, the dhal is graded by size. A large-sized dhal may attract a price premium of about \$100 - \$150 per tonne. About 80-90 per cent of chickpea import is used for making dhal.

4.3 The chickpea flour market

The use of whole chickpea for making flour depends largely on the type of plant used for processing. It was observed that, for flour making, the size of split chickpea is not important. The most important factor identified in the interview is the recovery rate. Flour millers often use desi type chickpea of slightly lower quality than that used for making dhal. Locally produced desi chickpea are mostly used for making flour, supplemented by imported ones. The colour of dhal is not a needed quality trait for flour making.

4.4 The roasted/puffed chickpea market

This market consists of two main types, namely, the puffed chickpea (phutana) market and the roasted split chickpea (roasted dhal) market. Domestically produced desi-type chickpea are often used because imported ones have a bitter taste, except for those from Tanzania and Myanmar. Desi chickpea from Myanmar and Tanzania are used for making roasted dhal because the taste is similar to that of locally produced varieties.

The preferred quality traits of roasted chickpea are large size and uniform shape. Although Gulabi (a local desi-type chickpea variety) is small compared to other desi-types, it is often used for making roasted chickpea because of its good taste, puffing quality and round shape. Gulabi chickpea fetches the highest price in the roasted chickpea market because of its superior qualities.

A summary of the preferred quality attributes of the most commonly used chickpea varieties in India is presented in Table 1 below.

Table 1: Quality characteristics and common uses of some chickpea varieties in India

Variety	Preferred quality characteristics	Common use(s)
Kabuli	Cream or white colour Large and uniform size Good taste and cooks fast	Direct food use
Desi	High recovery rate (for dhal) Light brown or yellowish colour Large and uniform size Thin seed coat Low moisture content High recovery rate	Split chickpea for making dhal Direct food use Flour (besan)
Mosambi	Light brown colour Uniform size Good puffing quality	Puffed chickpea (phutana) Direct food use

	Good taste and cooks faster	
Kantewala	Large and uniform size Light brown colour Low moisture content High recovery rate	Split chickpea for making dhal Flour (besan)
Annigeri	Large and uniform seed Medium brown colour Good puffing quality High recovery rate (roasted dhal) Good taste and cooks faster	Puffed chickpea (phutana) Roasted dhal
G5	Large and uniform seed Good puffing quality Good taste and cooks faster	Puffed chickpea (phutana))
Green Gram	Dark green colour Large and uniform size	Direct food use
Gulabi	Light brown colour Thin seed coat Low moisture content	Puffed chickpea (phutana)

Source: Market surveys.

5 Government intervention, pricing and chickpea marketing in India

The Government of India (GOI) recognises quite explicitly the importance of pulses in the diet of less-affluent people (AgWA, 1997). The government-liberalised chickpea trade in the 1990s to secure adequate domestic supply of pulses. Tariffs on pulses were reduced from 71 percent in 1993 to 35 percent by 1998.

This was in response to dramatic increase in domestic pulse production and the GOI's decision under the World Trade Organisation's (WTO) rulings to a phased reduction of their long-standing restrictions on imports of agricultural products.

Despite liberalisation of chickpea trade, the government continued to maintain an import levy on chickpea until 1998 when it was abolished. Despite these policy reforms, most crops in India are subject to restrictions on domestic trade, regulated under the Essential Commodities Act of 1955. These restrictions include: compulsory levies on millers, stocking limits for private traders, milling reserved for only small sector industries, occasional restrictions of interstate movements, and, for most crops, prohibition of futures trading (Gulati, 1998; Kelley, 1999).

Although there is no direct government regulation in chickpea marketing in India following deregulation of the chickpea market, the GOI continues to intervene in chickpea marketing. Government of India regulation prohibits export of split chickpea beyond 5-kilogram packs. This makes export of split chickpea more costly as the additional cost of packaging is estimated to be approximately \$7 - \$11 per tonne.

On the one hand, the removal of these restrictions will lead to increased demand for imported chickpea into India. On the other hand, the removal of this restriction will have an adverse effect on exports of chickpea to other importing countries since Indian exporters will

compete with other exporting countries.

Another policy of the Government of India that could influence trade in chickpea is the minimum support price (MSP) announced by the government for all crops, including pulses at the beginning of the season. Over the years, for pulses, the MSP has generally remained below the market price, and therefore has had no noticeable impact on the price and demand for chickpea in India.

Another restriction imposed in the Indian chickpea market is the State Governments' levy on whole chickpea exports to other states. The aims of this policy are to encourage processing of chickpea within states and discourage whole chickpea exports to other states as a way of generating employment within the state.

Currently, state government levy is 4.0 percent of the value of whole chickpea. It is estimated that, on average, traders pay between \$18 and \$37 per tonne for chickpea exports. The effect of this policy has been a reduction in chickpea exports from terminal markets with ports, especially Mumbai and Chennai, to Delhi. Consequently, this has resulted in low price for chickpea in Delhi and primary/secondary markets compared with other terminal markets.

This is due to the fact that most of the chickpea sold in Delhi and primary/secondary markets come from major producing areas in India which are generally of lower quality and with more impurities as compared with imported ones. The implication of this finding is that the removal of state levies could encourage increased demand for imported chickpea.

The State Government levy could have a beneficial effect on exporters of chickpea because by restricting exports to other states this creates an opportunity for exporting countries to target potentially lucrative terminal chickpea markets in India.

However, the government levy poses a problem for importers/exporters of chickpea in terminal markets and major primary/secondary markets, who may have to raise or discount their prices to account for the levy.

The price paid for chickpea in Indian markets appears to differ depending on chickpea variety and the type of market. Tables 2 and 3 illustrate price differentials of some common chickpea varieties at terminal and primary/secondary markets, respectively. Table 2 indicates that the price differentials for kabuli chickpea recorded in terminal markets is \$665 per tonne.

For other chickpea varieties, the price differential is between \$2 and \$368 per tonne in terminal markets. The terminal market showing the highest prices for kabuli chickpea is Chennai, and for desi-type chickpea is Chennai or Mumbai. Table 3 indicates that the price differential for kabuli chickpea is about \$642 per tonne, and for desi-type chickpea, it is between \$29 and \$194 per tonne.

The primary/secondary market showing the highest price for kabuli chickpea is Bhopal and for other chickpeas is Indore and Jalgoan.

Table 2: Price differential of common varieties at terminal markets in India (AUS\$/t)

Chickpea variety	Minimum price	Maximum price	Price differential
Kabuli	595 Mumbai and Delhi	1260 Chennai	665
Desi	420 Mumbai, Delhi	595 Chennai	175
Mosambi	525 Delhi	805 Mumbai	280
Gulabi	577 Delhi	945 Mumbai	368
Annigeri	508 Mumbai	647 Mumbai	139

Green Gram	455 Delhi	545 Mumbai	90
Kantewala	497 Chennai	499 Chennai	2

Source: Market surveys.

Table 3: Price differential of common varieties at primary / secondary markets in India (AUS\$/t)

Chickpea variety	Minimum price	Maximum price	Price differential
Kabuli	408 Indore	1,050 Bhopal	642
Desi	392 Indore	449 Bhopal	57
Mosambi	459 Bhopal	490 Indore	31
Gulabi	436 Indore	630 Indore	194
G5	429 Aurangabad	525 Jalgaon	96
Green Gram	374 Indore	403 Indore	29
Kantewala	396 Bhopal	438 Jalgaon	42

Source: Market surveys.

6 Challenges and Opportunities: Focus group results

In this section the challenges and opportunities in Indian chickpea market based on the views expressed by the market participants interviewed in May and September 1999 are discussed. Semi-structured interviews were conducted with key market participants- wholesalers, retailers, importers and processors, brokers and commission agents- to elicit information on the preferred quality characteristics of chickpea traded in India. About forty-five market participants were interviewed.

The semi-structured, in-depth interviews were preferred over a more structured kind of interviewing because of the busy schedule of market participants, allowing for limited time for interviews. The market participants interviewed included wholesalers- brokers, middlemen and commission agents - who are engaged primarily in the sale of chickpea. Wholesalers cover large trade areas and have large transactions. Brokers are wholesalers who do not take title to chickpea traded, but function in bringing buyers and sellers of chickpea together and assisting in negotiation. Other market participants interviewed were commission agents and middlemen.

Commission agents are wholesalers who represent buyers or sellers of chickpea and perform few functions for their clients but do not take title in the chickpea trade. Middleman purchases chickpea from brokers and commission agents to other businesses for resale. Retailers sell chickpea directly to the final consumer, and cover small trade areas and have small transactions. Processors are split chickpea (dhal) millers and roasted dhal or puffed chickpea millers who are engaged in processing chickpea to dhal and roasted chickpea, respectively. The notes produced from observation and informal discussions form the basis of the discussion presented in this section.

The market participants interviewed came from different locations expressing varied views about changing trends in chickpea consumption and consumer perception about quality characteristics of chickpea. The views of the market participants interviewed are not representative of the whole population. However, those interviewed are experienced traders and their views may reflect the general trend of issues relating to challenges and opportunities for export of chickpea to India. Therefore, the discussions that follow should be interpreted cautiously.

All types of traders tended to have similar perceptions concerning the role of government intervention in chickpea trade in India. Although traders noted that there is no direct government intervention in the chickpea market, they acknowledged that state governments continue to impose a levy on whole chickpea export across states.

As a consequence, traders discount price of chickpea in major centres due to the levy imposed. Traders expressed some frustration with the Government of India's trade restriction on the size of split chickpea export; the GOI permits only 5-kilogram packs of split chickpea to be exported. Traders felt that this has raised the cost of exporting split chickpea. Despite this, traders felt that government market-oriented trade policies have led to competition in the chickpea market in India, resulting in an increase in chickpea imports and a general decline in chickpea price.

Market participants tended to place greater importance on the physical quality characteristics and purity standards of chickpea in their decision-making activities and less emphasis on chemical quality characteristics of chickpea. The lesser importance of chemical quality characteristics of chickpea in the decision-making process of traders is probably due to the cryptic nature of chemical characteristics and the inefficiency in the Indian chickpea market.

The focus group indicated that the quality characteristic of chickpea required by end-user is what drives their decision-making processes to buy a particular chickpea variety. For example, a consumer wanting to buy kabuli chickpea for direct food use would seek one that is light or cream coloured and with less impurities. On the other hand, a dhal miller will permit some amount of impurities since the process of making split chickpea involves cleaning of seed.

The focus group noted that the characteristics that differentiate domestically produced chickpea from imported ones are size, weight, shape, colour and texture of chickpea. They emphasised the fact that domestically produced chickpea is sweeter than most imported varieties.

Few traders noted that Australian desi has a bitter taste and is therefore not suitable for making roasted/puffed chickpea. However, the bitterness is masked in the process of making split chickpea. Focus group also noted that the chickpea imported from Myanmar and Tanzania appears to have a similar taste to domestically produced ones.

This confirms the assertion made by [Kelley \(1999\)](#), who attributes the similarity of taste of Myanmar, Tanzanian and Indian chickpea to the similar climatic conditions in these countries. The traders interviewed feel that kabuli chickpea from Mexico is the most highly demanded compared with other imported and domestically produced ones because of its large size and sweet taste; Australian kabuli is second behind Mexico.

The market participants indicated that, for making split chickpea, the most preferred desi is one imported from Australia because of its high splitting recovery rate (estimated between 3-5 percent), uniform size and shape and fewer impurities; Australian desi should attract a price premium.

The focus group noted that imported chickpea are generally of a uniform shape and size and with fewer impurities than domestically produced ones because imported chickpea are cleaned in exporting countries. This assertion was confirmed by processors in Western Australia, who indicated that chickpea is cleaned before export to India.

Although Australia's chickpea export to India is considered to be superior to domestically produced chickpea and imported ones, the focus group noted that recent chickpea export from Australia appears to be a lower quality; it has a non-uniform shape and size and it is brittle. This issue of low quality chickpea export from Australia was explored further. It was revealed that some market participants do mix high quality chickpea imports with low quality ones to even up the price. As a result, the observed low quality chickpea export from Australia should be interpreted cautiously.

The market participants regarded competition from chickpea exporting countries as becoming important in influencing chickpea trade. This has resulted in better information flow from brokers and commission agents to traders. However, they noted that commission agents for Mexico do respond more quickly to their requests than agents of other exporting countries.

It is important to note that while other countries do have representative with the sole responsibility of promoting pulse imports to India, it appears Australia's trade promotions is handled by AusTrade Office in Mumbai (Bombay), India. If Australia is to effectively compete in the chickpea market, the Australian pulse industry should consider employing an agent with the sole task of promoting Australia's pulse exports to India.

The results of the survey indicate that there is still a potential for increased demand for chickpea in India for the following reasons.

First, is the gap between growth in food supply and demand – there is evidence to suggest a gap between the demand and supply growth in pulses (especially chickpea).

Second, the difference between the harvesting periods in exporting countries and India - India has two main harvest periods; one between March and April for harvesting the winter pulses, and the other in October for harvesting the summer pulses whereas in Australia, for example, chickpea harvest is in November providing the best opportunity to export to India at the time when there is a shortfall in domestic supply of chickpea.

Third, the quality differences between domestically produced chickpea and imported ones - consumer demand for chickpea is generally and strongly influenced by quality characteristics and purity standards of chickpea.

It was observed that consumers are willing to pay a price premium for a high quality chickpea and to discount a low quality one. Lastly, government trade policy and agricultural policy reform in the 1990s. There is evidence to suggest that government market-oriented policies are paving the way for increased competition and demand for chickpea in India.

7 Concluding remarks and policy implications for Australia

The Indian food economy is moving from a government-controlled economic system to a more liberalised market economy. Despite major reforms in the 1990s, which increases competition in the chickpea market, the GOI continues to regulate by setting minimum price of chickpea and regulating the size of chickpea export. State governments also levy whole chickpea exports. The reforms that have taken place in Indian chickpea market are likely to improve efficiency in the market and pave the way for increased competition in the chickpea market in India.

Some key findings of this survey are summarised.

First, this study indicates that economic and policy reforms are having an impact on chickpea trade in India. The analysis reveals that the GOI and State Government policy in relation to chickpea trade are obstacles precluding increased trade in chickpea in India. The consequences of further government intervention in chickpea trade in India needs further analysis since this could lead to further distortion of the chickpea market creating an uncertain policy environment.

Second, it is important to recognise that the Indian chickpea market is segmented mainly by the end-use of the product. Each market segment prefers different types of chickpea. Currently, Australian desi chickpea export is not suitable for making roasted chickpea or consuming whole, largely because of its bitter taste. The preferred quality characteristics of chickpea in Table 1 provide useful information to guide breeders in developing chickpea with specific quality characteristics to meet the needs of the end user, and for exporters and policy makers to develop marketing strategies targeted at specific market segments. Lastly, the results of this survey reveal that the quality characteristics and purity standards of chickpea are important factors influencing decisions of traders.

The survey results reveal that chickpea exporting countries, especially Mexico and Turkey, are beginning to differentiate their products. As a result, traders are willing to pay a price premium for a high quality chickpea and to discount the price of a low quality one. Australia's chickpea export to India is considered to be of high quality and free of impurities.

Although the results of this survey point to the fact that there is room for improvement, in terms of taste for desi chickpea and size for kabuli chickpea, Australia's exports are generally considered to be superior to chickpea produced domestically or imported from elsewhere.

This suggests that there is an incentive for Australia to differentiate its chickpea exports from those of other competitors by developing a brand name or trademark and promote it as one of higher quality characteristics than domestically produced chickpea and imported ones, particularly as it consistently outperforms other imported and domestically produced chickpea with respect to purity (low foreign matter) and splitting recovery rate.

Results of this study contribute to increasing our understanding of the Indian chickpea marketing system and the perceptions held by traders about Australian chickpea export into India. These insights can be useful in providing relevant information for chickpea exporters in Australia in developing more effective marketing strategies and for breeders and policymakers for deciding on allocation of scarce resources in improving chickpea quality characteristics.

Due to the exploratory nature of this study, further work is required to more fully understand the role various factors play by quantifying the impact of these factors on decision-making of traders in India.

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Footnotes

- 1 - School of Business and Economics, Monash University-South Africa Campus, Roodepoort, South Africa
 - 2 - CGIAR Interim Science Council Secretariat, Food and Agriculture Organisation, Rome, Italy
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Authorised By: Assoc. Prof. Bill Malcolm, Agriculture and Food Systems
Maintainer: Nanette Esparon, Agriculture and Food Systems
Email: webmaster@landfood.unimelb.edu.au

