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Organic Food Business in India: A Survey of Companies

Arpita Mukherjee[1*], Avantika Kapoor[1] & Souvik Dutta[2]

[1] Indian Council for Research on International Economic Relations, New Delhi, India

[2] Indian Institute of Management Bangalore, Bengaluru, India

[*] Arpita Mukherjee, Indian Council for Research on International Economic Relations, New Delhi, India

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Abstract

In recent years, the Government of India has come up with policy initiatives to promote organic food for domestic market and exports. Such measures are expected to increase investment in organic food manufacturing and retailing, and create employment. Indian entrepreneurs have responded positively to these initiatives and a number of start-ups have come up in this sector. Many conventional food manufacturers, retailers, and exporters have diversified their businesses to include organic food products. India's trade in organic food products has also increased.

This paper, based on a primary survey of companies engaged in organic food business in India, analyses their reasons for entering the organic business, their business models and sourcing process, how they work with organic farmers, what opportunities and risks they perceive, and what they want from the Indian government in terms of policies and incentives. It also examines the companies' perception about the growth of this sector, and makes policy recommendations on how organic food can attract investment across the food supply chain and continue on a high growth trajectory.

Keywords

organic, India, business, farming, exports, policy, survey

1. Introduction

Globally, there is growing awareness of environmental protection, sustainable agricultural practices, and the adverse impact of chemical inputs on the soil, environment and human health. This has prompted a shift towards organic farming and consumption of organic food. Organic food products are broadly defined as those food products which are produced without the use of synthetic external inputs such as chemicals, fertilizers, pesticides, and synthetic hormones or genetically modified organisms.

According to a survey by Willer and Lernoud (2017) across 170 countries, the total land under organic

farming increased from 11 million hectares in 1999 to 50.9 million hectares in 2015, and the total number of organic producers increased from 200,000 in 1999 to 2.4 million in 2015. In 2016, the size of the global organic food market was USD 110.25 billion in terms of value and it is projected to grow at a Compound Annual Growth Rate (CAGR) of 16.15 per cent during 2017-2022, to reach USD 262.85 billion by 2022 (TechSci Research, 2017). Europe and North America together generate around 90 per cent of the total organic food sales; the United States of America (US) leads the organic food market with a market size of over USD 39 billion, followed by Germany with USD 11.2 billion and France with USD 6.7 billion (YES BANK and Ingenus Strategy and Creative Research, 2016). A number of developed countries such as the US as well as developing countries such as India have taken measures to expand organic cultivation and production, and consumer demand for organic products is on the rise in these markets.

In India, the traditional method of agriculture was by default organic with negligible use of chemical inputs. However, the need to ensure food security led to the Green Revolution, which began in 1967. While India reached self-sufficiency in food grain production (Singh, 2000; Pearse, 1980), post-Green Revolution, the excessive use of chemical inputs resulted in the rapid degradation of soil (Murgai et al., 2001; Singh, 2000) and adversely impacted farmers' health (Mittal et al., 2014). From a consumer perspective, the increasing quantities of pesticides and fertilizers led to contamination of food and associated health damage (Pandey & Singh, 2012). In the 1970s and 1980s, when consumers in the developed countries were shifting towards organic food products, the demand for products like organic tea and spices in key export markets such as the US, United Kingdom (UK), Germany, and Japan increased. The premium price that consumers were willing to pay for organic food products prompted some Indian companies to enter the organic food export business. However, the domestic demand for organic food products began only in the last decade. Survey based studies show that Indian consumers, especially those with middle to high levels of income and higher education, believe that organic food products are healthier and superior in quality to conventional products, and they are willing to pay a premium for such produce (for example, see Sharma et al., 2016; Sarumathi, 2017). This has created lucrative business opportunities for the entrepreneurs.

With a wide variety of agro-climatic conditions, India can produce a wide range of organic crops (Rana et al., 2016; Chatterjee & Ganesh-Kumar, 2016). Field level surveys and studies pointed out that organic farming leads to an improvement in soil quality, crop yield, and overall sustainability of crop production systems (Rupela et al., 2006; Singh et al., 2007). Organic products also sell at a higher price compared to their conventional counterparts, which provides economic benefits to farmers (Ramesh et al., 2010). Given this, the Indian government started to support organic farming to enable India to achieve its development goals, ensure nutritious food, increase farmers' income, and increase investment, employment and exports in organic food products.

In 2015, India was ranked ninth among over 170 countries in terms of size of land under organic agriculture, with approximately 1.2 million hectares of land under organic cultivation (including land

in-conversion). The country was ranked the third highest in terms of increase in organic land, after Australia and the US. During the same year, India also had the largest number of organic producers in the world, with 585,200 producers (Willer & Lernoud, 2017). Valued at USD 0.50 billion in 2016, the organic food market in India is estimated to jump to USD 1.36 billion by 2020 (YES BANK and Ingenus Strategy and Creative Research, 2016).

In terms of trade, India ranked 11th with a share of 3.6 per cent in global organic food exports. In 2016-2017, export of organic products from India was valued at USD 370 million, which increased by approximately 17.5 per cent compared to 2015-2016 (Note 1). Data on India's import of organic products is not available. Some of the key organic products that are exported from India include oilseeds, cereals and millets, tea, pulses, and spices (Note 2).

Given this background, the paper, based on a primary survey of 75 companies engaged in organic food business, analyses their reasons for entering the organic business, their business models and sourcing process, how they work with organic farmers, the opportunities and risks they perceive, and what they want from the Indian government in terms of policies and incentives. It also examines the companies' perception about the growth of this sector, and makes policy recommendations for the holistic growth of this sector.

2. The Policy Landscape to Support Organic Food

To understand the government policies and initiatives to support organic food business, it is important to look at the institutional framework and governance structure. India follows a quasi-federal governance structure with a division of responsibility between the Centre and states. According to the Indian Constitution, "agriculture" is under the state list and, therefore, is under the jurisdiction of the state governments. The central government provides broad policy directions, negotiates trade agreements (including on agriculture), and provides support and subsidies for the promotion of the agricultural sector and trade.

At the Centre, the Ministry of Agriculture and Farmers' Welfare is the nodal authority for the promotion of agriculture and farmers' welfare, while the Ministry of Food Processing Industries is the nodal ministry for food processing. The Agricultural & Processed Food Products Export Development Authority (APEDA) under the Ministry of Commerce and Industry is the nodal agency for designing policies related to organic food exports. The Food Safety and Standards Authority of India (FSSAI), under the Ministry of Health and Family Welfare, is the nodal authority for designing policies related to organic food imports and domestic food business.

With the growing demand for organic food in the key markets especially the US and the European Union (EU), APEDA took the initiative to design export policy that can help the country sign equivalence arrangements with key trading partners (Note 3). The National Programme for Organic Production (NPOP) was developed by APEDA in early 2000, which laid down the standards, regulations, labeling process, logo, third-party mandatory certification requirements, and the

certification process for exports. The third-party certification system with traceability to farm was developed as products exported to key developed country markets can only be labelled as organic if they are certified by a third-party certification agency, which itself meets certain global standards. In India, there are 28 such certification bodies listed under NPOP (Note 4). India thereafter signed unilateral equivalence arrangements with the EU.

To help the domestic market for organic to grow, and to encourage small and marginal landholders to enter into organic farming, the Ministry of Agriculture and Farmers' Welfare came up with the Participatory Guarantee System for India (PGS-India) in 2011 (Note 5). The National Centre for Organic Farming (NCOF), under the Ministry of Agriculture and Farmers' Welfare, is the nodal agency for PGS-India. PGS-India is a voluntary self-certification system. The Ministry of Agriculture and Farmers' Welfare is of the view that by reducing the cost of third-party certification and through simpler certification process, it can support faster growth of organic farming. The PGS-India is based on International Federation of Organic Agriculture Movements' (IFOAM's) PGS guidelines (Note 6). The NCOF also started promoting organic farming through schemes such as the *Paramparagat Krishi Vikas Yojana* (PKVY) (Note 7), which is in partnership with state governments. Under PKVY, subsidies are given to promote organic farming in the Indian states through a cluster-based approach. Until December 2017, state governments created 7,208 organic clusters under the PKVY scheme (Note 8). This initiative, although adopted with a good intention, is distortionary, as farmers who had higher cost of third-party certification do not receive subsidy, while those who do not incur any cost of certification receive it. Whatever may have been the case, the organic policy classified farmers under three groups:

- Group 1: Farmers who are third-party certified and can export;
- Group 2: Farmers who are under PGS-India and can cater to domestic market but cannot export as per AEPDA's regulatory requirements;
- Group 3: Farmers who have never used any chemical inputs in their farms and have followed traditional Indian farming practices. They can cater to domestic market but cannot export as they have not gone for the third-party certification process as per AEPDA's regulatory requirements.

The regulatory framework also lays down the type of farmers from whom a company can source, and this depends on whether it caters to the domestic market or export market. A company engaged in organic business for the domestic market can source from PGS-India self-certified farmers, farmers that are by default organic (such as farmers in hilly or remote regions who have never used chemical inputs), or from farmers that are NPOP certified. However, a company engaged in exports has to be NPOP certified and can only source from NPOP certified farmers. A company importing organic food products into India can import products sourced from third-party certified farmers or farmers under PGS, provided they meet the FSSAI requirements.

Until 2017, India did not have a regulation for import of organic food products. In November 2017, the FSSAI established the Food Safety and Standards (Organic Food) Regulation, 2017, which was implemented with immediate effect. Organic food meant for sale and consumption, either imported or

produced domestically in India has to comply with the requirements laid down in this Regulation, especially those related to manufacturing, packaging, marketing, certification, and labelling. Regarding import of organic food in India, imports under bilateral or multilateral agreements on the basis of equivalence of standards of the exporting countries are not required to be re-certified when imported to India (Note 9). The FSSAI also launched the "*Jaivik Bharat*" organic logo for easy identification, and the "Indian Organic Integrity Database Portal" to help consumers verify the authenticity of organic foods. Some of the reasons for coming up with a domestic regulation were:

(a) the EU withdrew equivalence for processed organic products in 2014, which it had recognized with India since 2006 (Note 10), subsequent to which trading partners such as the EU and Canada were no longer willing to sign unilateral equivalence arrangements,

(b) with the recent increase in demand for organic food in India, foreign companies want a clear and transparent import policy for accessing the Indian market, and

(c) there have been incidences of fraudulent practices in India, and genuine companies were not able to get a premium price in the domestic market for organic products. They opined that a logo supported by the government would help them get that price.

Indian government has allowed 100 per cent foreign direct investment in food processing industries (Note 11), and in horticulture and cultivation of vegetables under controlled conditions (Note 12). The government has allowed 100 per cent foreign direct investment in single-brand retail trading (Note 13), and partially opened up multi-brand retail to foreign investment, subject to certain conditions. Subsequent to this, a number of companies including Amazon India have launched food-retailing business.

Given these government initiatives, the survey aimed to understand the experiences of companies in organic food business in India.

3. Sampling and Survey Methodology

The survey was conducted between January 2017 and August 2017, and covered 23 cities in India, where most of the organic companies in the identified product categories have presence. The cities included Delhi, Noida, Gurugram and Sonipat (national capital region), Chandigarh, Bengaluru, Kolkata, Indore, Hyderabad, Ahmedabad, and Mumbai, and these were selected after consultation with industry bodies and sector experts. The survey covered companies in organic food business across seven main product categories, namely tea, spices, herbs, medicinal plants, oilseeds, rice, and fruits and vegetables (Note 14), and operating in manufacturing/food processing, exports, imports, retailing, and wholesaling. Stratified random sampling technique was used to draw up the list of companies from APEDA's database, and information provided by industry associations such as the Association of Indian Organic Industry, certification bodies, and state government organic departments.

Semi-structured questionnaires were designed to conduct the interview. A few questions were kept open-ended to get the survey participants' opinions on different issues, including policy. E-mails were

sent to senior representatives of companies requesting them to give a mutually convenient time for the survey and one-to-one discussions. In some cases, the questionnaire was e-mailed in advance. Among them, 75 companies agreed to fill in the questionnaires and they gave appointments to the survey team for face-to-face interviews. Each interview lasted around 1-1/2 hours. Since the sample size is small, the data has been analysed using qualitative techniques.

4. Key Findings of the Primary Survey

The survey found that companies can be classified under (a) those who are only engaged in organic food business, (b) those who deal in natural and organic food, and (c) those who are into organic food and non-food products. While companies catering to the domestic market sell both fresh and processed organic food products, those involved in export are mainly engaged in semi-processed and processed food products across selected categories such as tea, rice, and spices. Exports of fresh organic produce are limited.

All companies interviewed had Indian ownership. Some foreign companies such as Amazon India have recently entered into organic food business while others are working closely with Indian companies for sourcing organic products.

4.1 Establishment of Business

Fifty-three companies out of 73 (Note 14) (72.66 per cent) started their operations 2006 onwards. There are six companies whose year of establishment is the same as the year they started their organic business, while there are nine companies whose year of establishment is just a year before the start of their organic business. This indicates that some companies started their business as an organic company, while others may have started their business in conventional produce and then moved into organic products. Companies such as Chamong Tee Exports Private Limited started in the conventional food business and diversified to organic to cater to the export market 1988 onwards. It supplies to companies like Wessanen UK, for their brand “Clipper Teas”.

The survey found that a number of young entrepreneurs with innovative ideas have established start-ups in organic food business. Farmer organizations have started companies such as Sahaja Samrudha Organic Producer Company Limited (SSOPLC), which is registered as a trust. Religious trusts such as Sri Sri Institute of Agriculture Science and Technology Trust have also entered into organic business.

Fifty-four companies in the sample (72 per cent) are engaged only in organic business, whereas the remaining 21 companies (28 per cent) are engaged in both conventional and organic food business. In the sample, 60 of the 75 companies (80 per cent) are primarily into organic food business with more than 90 per cent of the revenue being generated from it.

4.2 Reasons for Establishing Organic Business

The entrepreneurs were asked why they entered the organic food business. The reasons given included a passion for protecting the environment, the desire to ensure that future generations have access to

good quality food and remain healthy, the desire to help farmers get a better price for their produce, their realization of the huge overseas market for organic products while studying abroad, and the realization that India has to move towards safe agriculture and organic practices to sustain its exports. Some of the survey participants referred to themselves as social and environmental activists trying to develop a market for farmers. Those involved in exports said they started their business as exporters of conventional products and then went into organic food products for the premium price that it fetches in the developed country markets. In India, corporates in manufacturing and services sectors have to pay high income taxes and there are number of cesses. However, agriculture sector is tax-free and it receives several subsidies. This has prompted investment in agro-businesses where companies are linked directly to farms and farmers. Further, the government has come up with a flagship programme—"Start-up India", which gives several benefits to start-up companies. These factors have led to increase in entrepreneurship and investment in organic food business.

4.3 Product Categories and Branding

Companies in products like rice and tea, and catering to the export market are more specialized and have few product categories, while those catering to domestic market have a wider range of products. Seven companies reported that they have more than 100 different kinds of organic product categories. These are primarily retailers. Most companies sell branded products in India. In case of exports, they mostly sell unbranded products, which are subsequently branded in the destination market. Companies who are importing organic products mostly import branded products or raw materials that go into organic food processing.

4.4 Presence across India and Product Sourcing

The presence of the companies in India is related to factors such as where they source the product from and where their consumers are located. Nineteen companies have pan-India presence. Consumer demand for organic food is growing at a fast pace in large cities such as Bengaluru and Hyderabad and hence organic food companies locate in these cities. Sonipat is a hub for organic rice while Kolkata is for organic tea. Some of the states from which different products are sourced are presented in Figure 1.

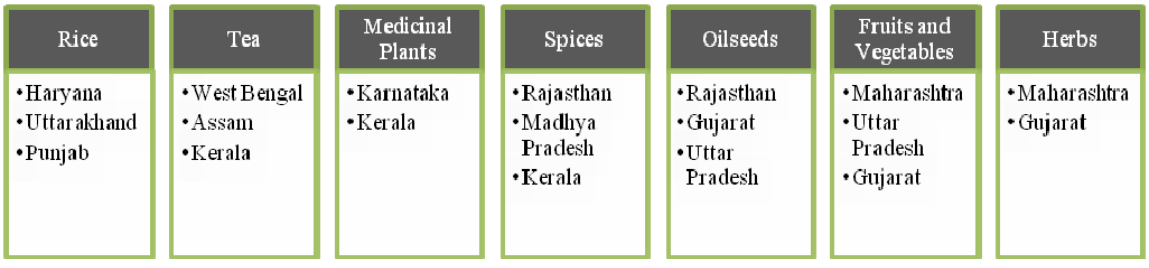

Figure 1. Major Indian States for Sourcing Organic Products

Companies were asked whether they sourced their products from, i.e., own farm/own estate, through contract farming, from farmer cooperatives, farmer associations, organic clusters, or from suppliers,

middlemen, government-owned agriculture market place, etc. Across all seven product categories, own farm sourcing, organic clusters, and sourcing from farmer associations and cooperatives are the most popular methods of sourcing (see Table 1). This is because it enables them to keep control over quality and ensure traceability. However, for certain products demand is far higher than supply and hence the companies cannot rely only on their own farms and/or known organic clusters. In such cases, the procurement agent or company representatives visit various organic farms or government-owned agriculture markets, check if products meet the company's requirements and then source the products.

Table 1. Sources Used by the Companies to Procure Organic Products

Products	Own farm	Farmers through contract farming	Farmer associations	Farmer cooperatives	Farmers in organic clusters	Others*
Oilseeds	11	0	2	2	6	7
Rice	9	6	3	2	13	7
Tea	18	0	1	1	1	19
Spices	8	4	3	2	9	10
Fruits and Vegetables	14	1	3	1	12	4
Medicinal plants	10	0	0	2	4	5
Herbs	11	0	1	1	8	7

* The companies that are in category "others" are primarily retailers who source their products from manufacturers/processors, Non-Governmental Organizations (NGOs) and suppliers, among others.

In India, farm sizes are small (average farm size is 1.15 hectare according to the 2011 Census (Note 15)) (see Dev, 2014) and, therefore, companies sourcing directly from farmers are expected to work with a large number of farmers. Twenty-seven companies worked with less than 50 farmers, with an average of 11 farmers. Eighteen companies were working with 50 to 500 farmers, with an average of 262 farmers. Sixteen companies (22.5 per cent) engaged with 500 to 5000 farmers, with an average of 1770 farmers. The remaining nine companies engaged with more than 5000 farmers. Fifty-five companies provide training to farmers on organic practices and help them with the third-party NPOP certification process. They want to establish long-term relationships with farmers by supporting them in other areas such as input procurement, health care facilities, and knowledge sharing about global standards and practices. The reasons for working with the farmers are to (a) ensure traceability to the farm for export, (b) maintain consistency quality, and (c) reduce supply risks.

4.5 Level of Integration and the Supply Chain

In terms of vertical integration of the businesses, there are only six companies in the sample which have integrated their business operations across the entire value chain from farming to processing and then to retailing in domestic market and/or exports. Regarding horizontal integration, 39 companies (52 per cent) are engaged in exports while six companies are engaged in both imports and exports (see Figure 2).

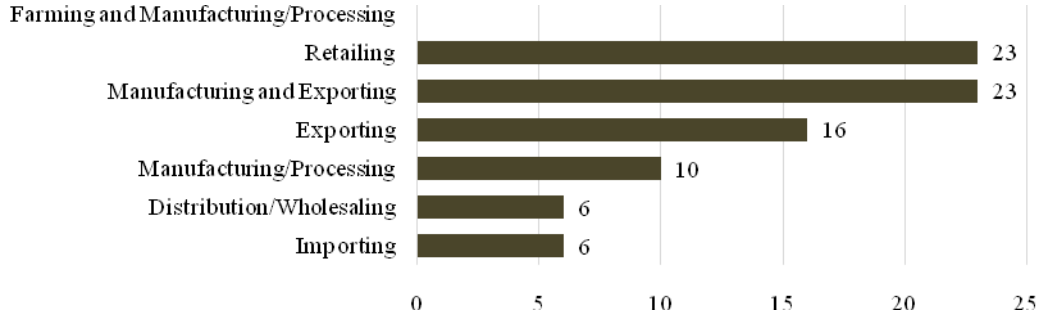

Figure 2. Operations of the Companies Engaged in the Organic Business

The supply chain of a company engaged in the organic business depends on a number of factors such as where the product is sourced from (for example, own farm, organic clusters, directly from the farmers, etc.), whether the product is exported, sold domestically or imported, and whether the product is fresh or processed. Those in the export business are more likely to ensure traceability to the farm.

Companies were asked about the measures they took to ensure that the entire supply chain remained organic. Some companies said that they follow the NPOP norms laid down by APEDA. However, NPOP does not impose any mandatory requirements for certification of pack houses, storage units, transportation facilities, etc.

Most companies said that they use separate warehouses or separate sections in the same warehouse specifically for organic products. They also ensure that in case of transportation, the carrier meets the requirements for organic transportation. Packaging material is carefully selected for organic products; for example, organic paper sacks are used, which lowers the chance of contamination. Sometimes, several layers of packaging (for example, paper, aluminium, etc.) are used so that the quality is maintained and there is no fungi infestation (such as aflatoxin infestation in organic rice). It is also ensured that the storage units are clean and hygienic. When companies are not sourcing directly from the farmers, they expressed concerns about their ability to track the authenticity of the products and they expressed concerns related to fraudulence and malpractices. In this context, it is worth mentioning that some states in India (for example, West Bengal), under Agriculture Produce Market Committee Act, do not allow companies to directly source from farmers.

4.6 Price, Revenue, Costs, and Profits

Organic products command a higher price than their conventional counterparts do (see Table 2), and the price difference according to survey participants exists due to certain demand and supply side factors.

Table 2. Average Price Difference between Organic and Conventional Products (in Percentage)

Product	Average Price Difference
Oilseed	17.6
Rice	17.1
Tea	18.6
Spice	18.9
Fruits and Vegetables	20.5
Medicinal plants	22.2
Herbs	21.8

On the supply side, the high cost of obtaining the organic certification, the high cost associated with use of more manpower in the field in place of mechanized farming, and the lack of subsidies on organic inputs in India unlike chemical inputs are the major factors that raise costs, and therefore the prices, of organic products. On the demand side, consumer are willing to pay a high price due to increase in awareness and health consciousness. Further, for certain organic products, demand is much higher than supply, which leads to higher prices.

Although many companies were not willing to share the information on revenue, they did talk about the revenue growth or decline in the last two years. While 64 companies experienced an increase in the revenue in the organic business in the last two years, seven companies (9.33 per cent) experienced a decline. One company in the sample did not experience any change, and the remaining three did not respond. Thirty-three companies experienced an increase of 10-20 per cent, 12 companies increased their revenue by 21-20 per cent, 9 companies' revenue increased by less than 10 per cent, 4 companies by 41-50 per cent, and only one company experienced an increase in revenue by more than 60 per cent.

In the survey, 71 out of 75 companies are directly engaged with farmers, which provides them a clear picture regarding cost of inputs, especially when comparing organic and conventional businesses (see Figure 3). The input costs for tea, spice and herbs are higher in the case of organic farming as compared to conventional farming while the input costs in conventional farming are higher for rice and oilseeds as compared to organic farming. For fruits and vegetables, the costs are approximately the same (Note 15). A number of companies operating in the fruits and vegetables segment pointed out that organic inputs, if use correctly, are cheaper because they can be made on the farm itself. This process will happen but as of now many of them have to purchase inputs and there is a shortage of good quality organic inputs in India, which adds to the price. Further, organic farming requires poly houses, netting,

fencing, etc., to prevent pest infestation and contamination, which add to input costs. Moreover, when the product is exported, the companies have to follow minimum wages and labour standards, which can increase costs.

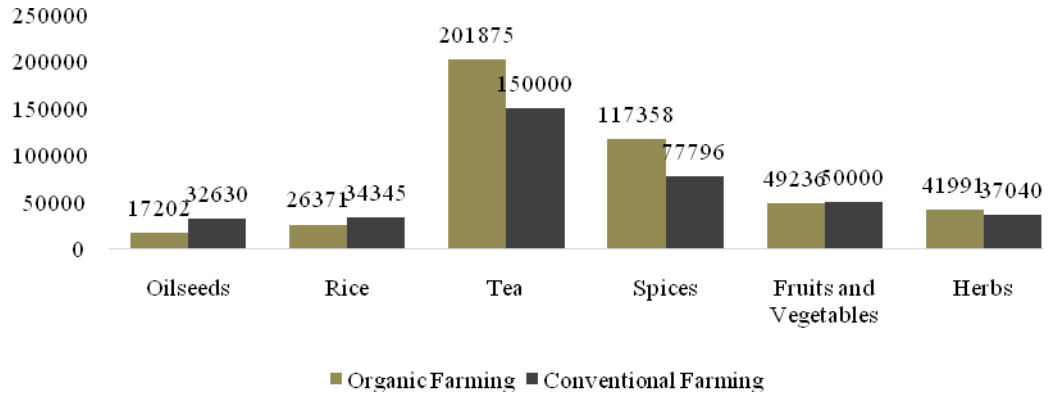

Figure 3. Average Input Costs—Organic vs. Conventional Farming (INR Per Hectare)

Note. The input cost for conventional farming for medicinal plants cannot be generated because of the lack of sufficient data and thus, the comparison cannot be presented.

Looking at the profit margins, companies in the sample were asked to compare the margins in organic business and compare it to those in conventional business. Sixty-one out of 75 companies responded that profit margins in organic products are higher compared to conventional products. Two companies responded that their profit margins in organic business are lower compared to conventional business (Note 16). Forty-one companies have reported a 10-20 per cent higher profit margin under organic farming, while 10 have reported a 21-30 per cent higher profit margin. Seven companies reported a higher organic profit margin of less than 10 per cent, and one company each reported organic profit margins larger than conventional profits in the ranges of 31-40 per cent, 41-50 per cent, and greater than 50 per cent.

4.7 Trade in Organic Products

Out of the 75 companies that were surveyed, 39 companies are engaged in exports and 6 companies are engaged in imports. The survey found that there are certain products like organic tea, organic rice, and organic spices, which have a high demand in the export market. Comparatively, export of organic herbs (in fresh format), and fresh fruits and vegetables is low.

Out of the 39 companies, 25 companies are exporting only one product, out of which 21 are in tea, two are in rice, and one each is in spices, and fruits and vegetables respectively. Four companies are exporting across two product categories, and the remaining nine are dealing with three or more product categories (Note 17). The EU is the largest export market and within the EU, the UK is the largest market followed by Germany. Other key markets are the US, Canada, and Southeast Asia. Japan and Korea are new and growing markets but the certification process in these countries is more difficult to

comply with than that in the EU or the US. Companies are diversifying their markets, and are exploring new markets such as China, Latin America, and Australia. Market for organic food products is growing at a fast pace in the Middle East.

There are different ways in which companies have established export supply chains. They have met foreign buyers in fairs and events, or the buyers have visited India and checked their products. The buyers give specific requirements, which the companies such as Phalda Agro cater to. For example, UK companies such as Bart Ingredient for spices and VeeTee Rice Limited for organic rice source from processors in India after giving them specific requirements. Sometimes foreign buyers enter into partnership/contract with Indian companies. Indian entrepreneurs in foreign countries, such as the Spice Root Limited in the UK, have established supply chain through Indian companies like Vedic Agrotech Private Limited, in which the Indian company ensures that the product meets the UK requirements while the UK company markets the products through various channels (store and non-store retail formats). With the growth of online organic food products, a number of Indian companies are trying to access the global market through platforms such as Amazon Global.

Demand of organic imported food products in India is low, but companies are importing raw materials such as juice concentrate. Some imported final products include organic chocolate, olive oil, and organic herbs.

4.8 Reaching out to Consumers

The domestic market for organic products, although growing at a fast pace, is still nascent. Companies try to publicize their products through fairs and exhibitions, and a number of state governments, such as Karnataka Government through its "Organics & Millets 2018 International Trade Fair", are supporting such exhibitions. Processors with well-developed supply chain and ability to cater to a large demand are selling their products through multi-brand retailers, while smaller players are trying other modes such as selected health stores, standalone organic retail outlets, and home delivery through telephone order or websites.

Out of the 75 companies, 24 are engaged in organic food retailing business (both store and non-store formats). Of these, eight are engaged solely in the retail business, and the remaining 16 are also engaged in other businesses such as exporting, manufacturing and processing. The store-based retailers operate through various formats, such as supermarkets, general stores, hypermarkets and convenience stores, online e-retail stores, as well as single-brand and multi-brand stores catering solely to organic sales. Eight retailers said that they are single-brand, while another eight said that they have online retail formats. Fifteen out of 24 retailers in the survey have more than one retail outlet. Out of these, 14 have more than one outlet in the same city.

Retailers can store solely organic products in their stores or have a combination of both organic and conventional food products. Fourteen companies out of 22 (Note 18) claimed that they only store organic products, implying they are 100 per cent organic retail outlets. Retailers who have both organic and conventional products (8 retailers in the study) said that they do not put organic and conventional

products together on the same shelf.

When asked about their consumer base, 22 (Note 19) retailers said that their customers are from upper middle income and higher income groups, and the percentage share of customers in these two income groups are 33 per cent and 62 per cent respectively. Thirteen retailers out of 22 have reported that consumers are willing to pay more for organic produce, while 9 said that consumers were not willing to pay more for organic produce. Thirteen retailers reported that consumers did not prefer imported organic products to domestic organic products and the remaining did not respond to the question. Overall, retailers pointed out that the Indian market for imported organic food products is still at a nascent stage.

4.9 Growth Projections and Future Expansion

The study covered companies' perceptions about current growth and growth projection for a short term period, that is, the next 5 years. Sixty-nine companies have reported current growth of organic business in India while only 36 have reported growth in organic business in the next 5 years (see Figure 4). Companies, on an average, forecast a growth rate of approximately 14 per cent in the organic food market in India in the current year, and an annual growth rate of 20 per cent in the next five years. This indicates that the organic market is a fast growing market in India.

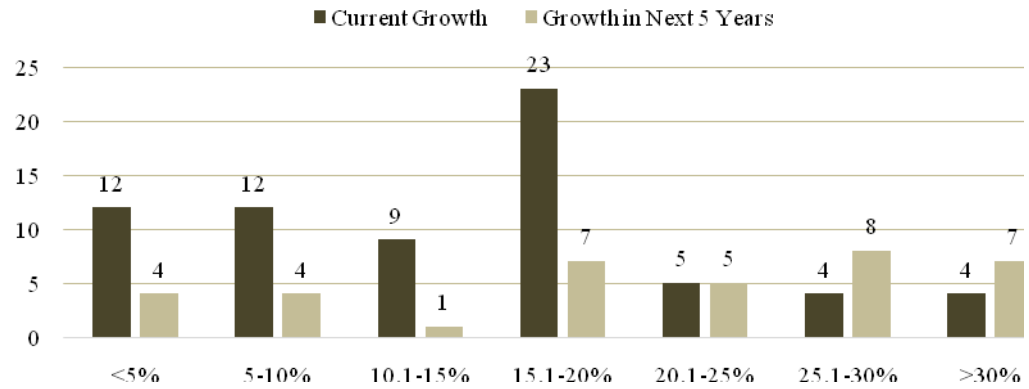

Figure 4. Current Growth Rate and Growth in Next Five Years of Organic Farming in India (in Percentage)

Figure 5 gives an estimate of the growth projections in the next 5 years of organic products in the domestic market and in the export market by different product categories. Growth projections for the export market are on average higher than for the domestic market for all products except herbs. The highest projected growth in domestic markets is for fruits and vegetables at 25.6 per cent, while for exports, it is oilseeds at 30.5 per cent.

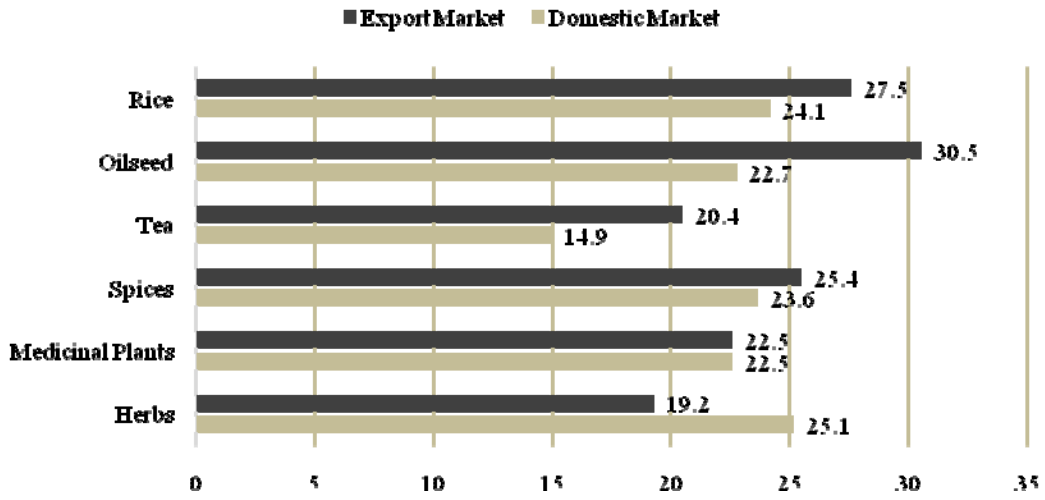

Figure 5. Growth Projections of Organic Products in the Domestic Market and the Export Market in the Next 5 Years (in Percentage)

Note. For fruits and vegetables, the projected growth in exports cannot be calculated because of lack of observations (most of the respondents did not respond to this question). The growth projection for fruits and vegetables for the domestic market is 25.6 per cent over the next five years.

Given that the organic sector is growing at a fast pace in India, companies were asked whether they wish to expand their product portfolio and diversify across products or vertically expand (for example, from processing to retailing) in the next five years. Thirty-four companies out of 71 companies (48 per cent) (Note 20) said that they would like to diversify their product portfolio and diversify the supply chain operations in the future, while the remaining 37 companies did not want to diversify. Fourteen out of 34 companies whose business in a particular product is more than 80 per cent want to diversify. However, there is no trend for any particular product. Out of 37 companies who do not want to diversify, 20 of them are presently producing only tea and four companies are primarily producing rice. When asked specifically in which areas they would like to diversify, companies said that they would like to diversify in terms of increasing the volume of business, increasing their share in the domestic market, and increasing the product range. Some of the major products in which companies would like to enter into are organic pulses and soybeans.

5. Discussion—Barriers and the Way Forward

As part of this study, the companies were asked to explain the issues they faced in setting up their business, in their day-to-day operations, and the general business climate, among others. The key business risks include product contamination, unfair competition from fraudulent players, lack of consistent quality of supply, shortage of certified good quality inputs, multiple regulatory bodies with piece meal policies, and lack of supply chain and infrastructure. If one analyses the risks, a number of

them arise from lack of a clearly defined comprehensive policy backed by a strong institutional framework and good governance. One of the issues raised by all companies is the lack of a nodal agency for organic products. Unlike most countries where the agriculture ministry is the nodal agency for organic products, in India, separate government bodies have issued regulations for exports, and for imports and the domestic market, which are difficult to adhere to if a company is catering to both the domestic market and exports. Survey participants are of the view that there should be a single comprehensive standard and regulation for organic food products for domestic market and trade. The regulations should also clearly define the punishment for fraudulent practices.

Further, there are issues in adhering to the regulations. For example, NPOP states that third-party certification can only be done through the third-party certified bodies based in India. Companies therefore cannot use organizations such as UK's Soil Association, which are not physically present in India, while their buyers in the UK demand the product to be certified by the Soil Association. If certification bodies that are internationally recognised are allowed to certify products in India, it will be beneficial for companies engaged in trade.

One of the biggest risks that deter farmers from venturing into organic farming is the risk of lower yield. Further, chemical inputs are highly subsidized in India, while there is limited subsidy for organic farming, and that too is given under PGS-India, and not for third-party certification, which is costlier. However, products under PGS-India cannot be exported, and hence farmers don't benefit from the premium that organic products fetch in the international market. Further, subsidies under PGS-India may discourage farmers from going in for third-party certification. According to a number of scientists and agriculture experts, it may take 6-7 years for the land to be fully converted and the yield to increase. During this period, the government can give some subsides to the farmer as is given in countries such as the UK. Further, the high subsides given to chemical inputs may be reviewed and reduced, given their harmful effects on soil and human health.

Shortage of good quality organic seeds and organic inputs can lead to poor yields and/or poor quality produce. Government is working on the standards for organic inputs and an internationally approved quality standard will help the genuine suppliers and buyers.

Organic farmers are located in hilly and remote regions where the supply chain is underdeveloped. Studies have shown that logistics and transportation costs are as high as 14 per cent of the Gross Domestic Product (ASSOCHAM and Resurgent India, 2016). Survey participants pointed out that it is extremely difficult to set up the sourcing network, especially in the case of products like fresh fruits and vegetables, and it is difficult to transport the product from remote areas in absence of basic facilities such as pack houses, cold storages and refrigerated vehicles. Poor storage and warehousing facilities also increase the chances of contamination such as aflatoxin contamination while the product is in transit. Further, the cost of using refrigerated transportation and cold chains is very high, and there are delays at ports. The government acknowledges the need for investment in the supply chain and logistics infrastructure, which will enable farmers to connect to their markets. In the Central

government's Budget of 2018-2019, proposed to create an Agri-Market Infrastructure Fund for developing and upgrading agricultural marketing infrastructure in the 22,000 Grameen Agricultural Markets (village level markets) and 585 Agricultural Produce Market Committees. The Budget also proposed to create roads to enhance connectivity under Prime Minister Gram Sadak Yojana Phase III. To ensure longer shelf life for perishable commodities such as tomato, onion and potato, which are consumed throughout the year, the government proposed to launch an "Operation Greens" which is expected to promote Farmer Producers Organizations (FPOs), agro-logistics, processing facilities, and professional management. These measures are likely to address some of the logistics issues.

Some companies referred to high tariffs on imported ingredients and high corporate taxes and cesses, which adversely affect their competitiveness and makes it difficult to establish manufacturing facilities in India. Others referred to difficulties in sourcing from multiple farmers, which can lead to quality inconsistency. They also referred to regulatory barriers preventing direct sourcing from farmers in certain states. Direct farmer-company linkages will reduce costs by taking out intermediaries, it will increase farmers' income, and ensure traceability and product ownership. Hence, government may look into this issue. To attract foreign investors to invest in manufacturing facilities in India survey participants pointed out that custom tariffs and corporate taxes have to be lower.

To conclude, this first of its kind survey of companies in organic food business shows that the sector is growing at a fast pace in India. However, there are certain concerns raised by the businesses and if these are addressed through the right policies, there is potential for further growth, investment and employment generation in this sector, which will also lead to better quality food for consumers, higher income for farmers, and enable the government to reach its sustainable development goals.

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Notes

Note 1. See http://pib.nic.in/newsite/PrintRelease.aspx?relid=160780 and Response to Lok Sabha Unstarred Question Number 3574 (H) and 1929 (H) (accessed on 9 February, 2018).

Note 2. Source: http://apeda.gov.in/apedawebsite/organic/PresentStatus.htm (accessed on 7 February, 2018).

Note 3. Different countries can have different regulations and standards of organic products, which can act as a barrier to trade. To mitigate this they can sign equivalence arrangements. An equivalence

arrangement in international trade implies that two or more trading partners (governments or jurisdictions) recognize each other's technical regulations as equivalent for the purpose of trade. In simple terms, equivalence means the recognition of standards in each other's countries. These could either be unilateral equivalence (non-reciprocal or only one party recognizes the other's standards) or bilateral equivalence (reciprocal or both parties recognize each other's standards).

Note 4. Source: http://www.apeda.gov.in/apedawebsite/organic/npop_certification_bodies.doc (accessed on 22 February, 2018).

Note 5. http://www.pgsorganic.in/history-of-pgs-in-india/ (accessed on 8 February, 2018).

Note 6. Although PGS is not recognized in developed countries (such as the UK), a number of developing countries including Brazil, Mexico, Thailand, Malaysia, Cambodia, Philippines, Vietnam, and Sri Lanka have adopted this system.

Note 7. NCOF was formed in 2004 as a part of the pilot project "National Project on Organic Farming" during the 10th Five Year Plan (date) period. For details on NCOF and PKVY see http://ncof.dacnet.nic.in/ and http://ncof.dacnet.nic.in/Operational_Guidelines/PKVYguidelines_Feb17.pdf (accessed on 16 February, 2018).

Note 8. Source: Extracted from the Response to Rajya Sabha Unstarred Question Number 803 accessible at http://rajyasabha.nic.in/rsnew/question/rstype.asp (accessed on 16 February, 2018).

Note 9. Source: https://www.fssai.gov.in/dam/jcr:6bd255c2-bba3-4cbd-8408-d4a9254473d4/Direction_Organic_Food_09_11_2017.pdf (accessed on 9 February, 2018).

Note 10. Source: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008R1235&from=EN (accessed on 16 February, 2018).

Note 11. Source: http://dipp.nic.in/sites/default/files/lu1266_1.pdf (accessed on 21 February, 2018).

Note 12. Source: http://dipp.nic.in/sites/default/files/pn5_2016.pdf (accessed on 21 February, 2018).

Note 13. Source: http://pib.nic.in/PressReleseDetail.aspx?PRID=1516115 (accessed on 21 February, 2018).

Note 14. In the questionnaire, an option, "others", was given to fill up additional product categories.

Note 15. Two companies did not give the year of establishment.

Note 16. Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=132799 (accessed on 16 February, 2018).

Note 17. Input costs calculation for conventional farming in the case of oilseeds, rice, tea and spice are based on only 2 observations while for fruits and vegetables and herbs are based on only 1 observation. The input cost for conventional farming for medicinal plants could not be generated because there are no observations.

Note 18. Twelve companies did not respond to the question.

Note 19. One company did not answer the question in the survey.

Note 20. Two companies did not respond to the question.

Note 21. Two retailers did not respond.

Note 22. Four companies did not answer the question on whether they want to expand their portfolio and diversify.