

Sharing economy approach for the development of the organic food market in India

Neeraj Dangi and Sapna A. Narula

*Department of Business and Sustainability, TERI School of Advanced Studies,
New Delhi, India*

Abstract

Purpose – This paper explores the contextual relevance of sharing economy for the organic food market in an emerging economy like India.

Design/methodology/approach – Case study approach was used to collect empirical data from different types of organic food markets.

Findings – Organic food farmers markets compared to online and health food stores tends to facilitate sharing economy more since it helps them to build value, scale and trust. By sharing resources, skills and spaces, organic farmers markets have increased organic food availability, reduced its cost of certification and operation besides managing consumer trust. Subjective influence through social media and offline interaction reduces information asymmetry at zero marginal cost. Organic food producers/retailers can get a competitive advantage by tapping underutilized assets to create value and opportunities besides overcoming their demand and supply constraints.

Originality/value – The research offers a fresh perspective to the organic food sector, particularly in emerging economies like India. It could assist all stakeholders to overcome the current demand and supply challenges faced in organic food markets.

Keywords Organic food markets, Organic farmers markets, Sharing economy, Organic food value chain

Paper type Research paper

Introduction

Rising public awareness about pollution and environmental issues has raised consumers demand for environment-friendly products (Teoh and Gaur, 2019; Gupta *et al.*, 2018; Chaudhary and Bisai, 2018). Organizations are responding by altering their operations and products (Martinez, 2012; Svensson and Wagner, 2015; Gupta and Anand, 2013; Ozoliņa and Rošā, 2013; Narula and Desore, 2016) to become more sustainable (Dangi, 2015; Gupta and Racherla, 2016, 2018). These changes are also reflected in the agri-food sector at different levels. The proliferation of organic agriculture, organic food and the alternative food institutions (AFIs) is a testament to this fact (Miralles *et al.*, 2017; Narula and Dangi, 2014; Asian *et al.*, 2019).

The global production and consumption of organic food have been steadily rising (Sahota, 2018; Lernoud and Willer, 2018; ASSOCHAM and EY, 2018). As per Lernoud and Willer (2018), there were 69.8 million hectares of certified organic agricultural land in 2017. The total worth of organic food and drink market in 2017 had reached nearly 97 billion USD (Sahota, 2018). Although, the market is growing in all regions of the world, yet nearly 90% of demand for organic products is concentrated in North America and Europe that together hold just 25% of organic land area (Sahota, 2018).

The USA is the largest consumer of organic food products at 48.7 billion USD retail sales in 2017 with a per capita consumption of 137 USD (Sahota, 2018). The organic food market in India, though nascent, is also growing and was estimated to be worth 207 million USD in 2017 (Lernoud and Willer, 2018). The average per capita expenditure on organic food in the world stood at 12.8 USD (2018) but only 0.21 USD (2017) in India (Schlatter *et al.*, 2020). So, though

Sapna A. Narula is currently based at School of Management Studies, Nalanda University, Rajgir, India.



the desire to consume safe and healthy food exists, still, it has not concurrently increased the sale of organic food products.

Majority of the organic food demand in India has been found in big urban regions (Oswald, 2013; Nandi *et al.*, 2017) primarily metro cities (ASSOCHAM, 2013) that have seen growth by 95% since 2012 (ASSOCHAM and EY, 2018). The sharing economy has been used in many industries to overcome some of the issues facing the conventional economic setup. Many businesses in the service industry like Uber, Airbnb, Ola, OYO rooms have flourished by applying its principles. The growing importance of sharing economy and its application in many sectors make it prudent to evaluate its relevance in the organic food market in India as well. The paper is relevant since sharing economy can assist in overcoming some of the supply and demand constraints that are limiting the growth of the organic food sector in an emerging economy like India. Further, no study in India has been conducted on the organic food market analysis from a sharing economy perspective.

Literature review

The concept of sharing economy is becoming popular. Technological possibility (ICT) (Narula, 2009, 2017) coupled with an economic and environmental necessity (Gupta and Purohit, 2013) has driven the growth of sharing economy (Schor and Cansoy, 2019) in diverse industries. Different initiatives of sharing economy have proliferated across the world involving accommodation, tools, cars and others (Botsman and Rogers, 2010; Gansky, 2014; Martin, 2016; Schor and Cansoy, 2019). All initiatives of sharing economy (Belk, 2007; Martin, 2016) offer shared access and ownership of resources, goods and services for multiple actors (Botsman and Rogers, 2010; Belk, 2013). Sharing economy is also emerging in the agri-food sector (Miralles *et al.*, 2017; Martin, 2016) through concepts like food swapping (Schor *et al.*, 2016) food sharing (Choi *et al.*, 2019) and food networks (Martin, 2016). Food swapping involves sharing homemade, homegrown and foraged foods with each other. Food sharing is about sharing extra edible goods with those who need it, be it, farmers with excess crops or households with leftovers thereby reducing food waste (Braw, 2014). Additionally, food sharing also includes concepts where individuals put their underutilized resources like culinary skills to generate extra income. So apart from redistributing their surplus resources like food or skills, they can become more environmentally friendly and also economically inclusive (Braw, 2014). Such initiatives are indispensable, considering that nearly one-third of food produced, i.e. 1.6 billion tons of food is wasted or lost globally per annum (FAO, 2013; Hegnsholt *et al.*, 2018) worth 1.2 trillion USD (Hegnsholt *et al.*, 2018). Thus, such concepts of sharing economy are not just good for Earth and economy, but also good for neighborly relations.

Sharing economy models can be broadly divided into for-profit mutualization and free mutualization. Online market spaces like Uber, Airbnb are examples of for-profit mutualization. On the other hand, farmers markets that facilitate genuine sharing can be classified as free mutualization (Ertz *et al.*, 2019). Accordingly, Schlagwein *et al.* (2019) describe sharing as an “an IT-facilitated peer-to-peer model for commercial or non-commercial sharing of underutilized goods and service capacity through an intermediary without transfer of ownership”. It tends to be sustainable, both globally and locally by supporting the social and economic actors creating strong communities. Being more decentralized, it offers products, services and opportunities at a smaller scale to consumers (Miralles *et al.*, 2017). Some of the common features of sharing economy are collaborative consumption, trust among participants, pooling of goods and services, decentralization, small economic actors, trust in sharing community and efficient use of underutilized resources (Botsman and Rogers, 2010; Botsman, 2013; Belk, 2013; Martin, 2016; Schor *et al.*, 2016; Miralles *et al.*, 2017; Schor and Cansoy, 2019).

Despite its benefits, the sharing economy is also subject to limitations. It may also possibly create a poorly regulated market environment leading to issues of tax avoidance and

labor rights like non-permanency of employment (Martin, 2016). This leads to the pursuit of economic activity rather than genuine sharing (Schor and Cansoy, 2019). In such conditions, it becomes non-inclusive (Schor *et al.*, 2016), defeating its fundamental premise.

Various stakeholders have tried to overcome challenges in agribusiness through cooperatives and or usage of technology especially in emerging economies (Narula, 2009, 2017). Principles of sharing economy spread risk and investment, reduce cost and improve access (Miralles *et al.*, 2017; Asian *et al.*, 2019) by sharing human and physical resources. Knowledge, assets, time, money, skills and goods; all can be shared. Sharing economy initiatives are often based on decentralized crowds rather than centralized corporates and state aggregates (Asian *et al.*, 2019).

Sharing costs of organic certification and labeling have reduced the cost of organic food production for farmers (Bhattarai *et al.*, 2013). Previous researchers have studied food sharing for reducing food waste (Choi *et al.*, 2019) to improve organic food value chains through cooperatives or food hubs (Berti and Mulligan, 2016; Narula, 2017). In organic food value chains, underutilized assets can be shared with other actors (Miralles *et al.*, 2017) like farm equipment, labor and skills through cooperative arrangements (De Toro and Hansson, 2004). Thus, community building (Miralles *et al.*, 2017), personal relationships and social influence (Schanes and Stagl, 2019) are important drivers in sharing economy value chain. (Edbring *et al.*, 2016; Botsman, 2013).

Yet, the divergent views on sharing economy provide a limited understanding of the influence of organizational systems on sharing of resources, particularly in the food sector (Miralles *et al.*, 2017; Martin, 2016).

Methodology

The prime objective of the study is to find the relevance of sharing economy to the organic food markets in Delhi-NCR to improve its demand and supply across its value chain. Using organizational mechanism, the study interprets the differences among different organic food market systems in terms of shared resources, organization control, bureaucracy, leadership, stakeholders and primary focus (Miralles *et al.*, 2017). The study uses a multiple case study approach across three organic food value chains to address its objective. The organic food in Delhi-NCR is available in malls, specialized organic food stores, online and informal farmer's organic food markets. The scope of study only considered those outlets or markets that specialize in organic food and not keep just one section of organic food with conventional food products. The target population was the functional organic food retail points (online and physical retailers and informal market operators) prevalent in Delhi-NCR. It consists of the state of Delhi and the areas adjoining Delhi- Faridabad and Gurgaon (in the state of Haryana) and Ghaziabad, Noida and Greater Noida (in state of Uttar Pradesh).

The current study is part of a larger study that was conducted to ascertain the determinants of organic food buying behavior of consumers in Delhi-NCR. We chose personal interview and participant observation to ascertain the relevance of sharing economy to their organizations. The respondents were important stakeholders in their respective establishments, i.e. owners, retail managers or organic farmers (in organic food markets). To get unbiased responses, we did not specifically refer them to sharing economy but to their operations in general. The interview format was unstructured. Based on inclusion criteria, we contacted 30 organic food outlets/markets within Delhi-NCR for our research. Only ten agreed to our request. All the organic stores run by companies who own multiple chains referred us to their respective main offices. Upon following with corporate-run organic food outlets, we did not elicit any positive responses. Of the 10, three were online; five were organic food stores and two organic farmers markets. 1 online organic food store could not participate due

to last-minute exigency. So finally we were able to study nine organic food stores/markets model. The profiles of the responding markets varied. The questions were generic regarding their operations and did not seek specific details regarding financials until and unless given by the interviewee. It was supplemented with participant observation and secondary data. The interview focused on three main objectives; sourcing and logistics of organic food, food outlet/market operation and its marketing to consumers. Analysis of the qualitative data from the cases highlighted the heterogeneity in the intensity of sharing tangible and intangible resources among the three organic food market systems.

Empirical findings

Based on the empirical data of three types of organic food markets, key differences among them were analyzed. The differences were identified under five categories: sharing resources, organization control, the leadership of the initiative, stakeholders and primary focus (Tables 1 and 2).

Online organic food markets

These AFIs are characterized by a lack of physical presence hence it is an organic market space rather than a market place. Being digital, it operates 24/7, offering the convenience to its customers to place orders at the time and place of their choosing. The ordered food products

Features	Online	Formal organic retail store	Informal organic farmers market
Product range	Large	Medium	Limited
Business hours	24 h	6 days/week	1 day/week (morning to noon)
Reach	National/regional	Neighborhood	City
Product type	Mostly processed or packaged	Processed, packaged and fresh perishable items	Mostly fresh perishable items
Digital footprint	e-commerce website, social media	Mostly social media, information website	Only social media
Physical footprint	None	Store	Market
Organic food certification	Primarily third party	Third-party (Processed, packaged), Peer (Raw)	Mostly peer, some third party
Market space/place	Exclusive ownership	Exclusive ownership of physical assets or on rent	Physical market place hired for a few hours/week and cost-shared among farmers/sellers
Sharing resources	Online experience	Supply logistics (for few products)*	Market place, group/peer certification (70%), supply logistics (40%), Online and offline knowledge and experience
Organization control	Formal and legal	Formal	Informal
Leadership	Supplier-led initiatives	Supplier-led or cooperative	Producer led initiatives
Stakeholders	Business owners	Business owners or NGOs	Community of producers and consumers
Prime focus	Economic and environmental	Economic and environmental	Economic, environmental and social

Note(s): *Some products sourced from neighboring farmers/suppliers

Source(s): Authors elaboration from Miralles *et al.* (2017)

Table 1.
Key features of
different organic food
markets

get delivered. This type of AFI fulfills the need of customers with time constraints. The fundamental reason for its establishment is commercial and it often includes formal contracts in its transactions. These are run usually by retailers rather than producers/farmers. These AFIs are governed by formal practices for operational control. Owing to its organizational setup, the customer interaction is through technology like phone, website or app rather than in person. It specializes in processed food rather than raw produce. It mainly relies on third-party certification for product differentiation. It's sharing of resources is generally limited to social capital through online interaction and over social media.

Health food stores

Health food stores are specialized brick and mortar food stores that specifically stockpile organic or natural products. Often based close to their customers' locations, they may be commercially owned or run by non-profit organizations or cooperatives. The physical stores may be owned or rented from other entities using formal contracts. Supply from neighboring farms can be shared collectively. Social capital is built using personal interaction at the store. Being, physically close to customers with longer business hours than a farmers market, the potential for stronger personal interaction remains high compared to online AFI. However, information asymmetry remains since there is an intermediary between the customer and the producer.

Organic food farmers markets

This is a direct (producer-consumer) informal temporary weekly market run collectively by the organic farmers. It specializes in raw produce of fruits and vegetables which often use group certification schemes to keep costs lower. Its organizational structure permits sharing of knowledge, skills, assets and labor at different levels of the organic food value chain. Producer/suppliers member collectively share the cost of the market place. They promote the organic food market primarily through social media including communal web page. Often the cost of logistics is shared by neighboring farmers. The online communication with the customer is augmented with physical interaction. The consumer meets the food producer directly reducing transparency and traceability concerns. This has the highest potential of building social capital and trust. Here, the goal is to provide access rather than ownership.

Discussion

The prime objective of this research is to identify how sharing economy gives a competitive advantage to the organic food market ecosystem over current economic setup in an emerging economy. Empirical evidence from the study suggests that among three types of organic food

Table 2.
Resource sharing in the organic food value chain in different organic food markets

	Online	Formal organic retail store	Informal organic farmers market
Production/ procurement			Assets, knowledge skills, group certification
Logistics and distribution	Customer location delivery	Aggregation-on farm pick up	Aggregation-on farm pick up, on-market drop off
Marketing	Social media and e-commerce management	Knowledge	Knowledge and skills: Reducing information asymmetry online (social media) and offline
Sales			Hiring space for the market, community engagement, social events

markets, the farmer's markets tend to follow the tenets of sharing economy more compared to other organic food market systems (Figure 1). Organic food markets are more likely to accrue the benefits sharing economy provides, giving it a competitive edge over others in the long run.

Consumers, in general, identify organic produce through certification and labeling (Andrea Blengini and Shields, 2010; Harris, 2007) that is based on prohibition since it communicates what it lacks (eg. chemical-free, no artificial additives, lack of harmful chemical pesticides) rather than what it is (Pomsanam et al., 2014; Escobar-Lopez et al., 2017). Thus, the organic food market is primarily a credence market since credence attributes are valued more than search and experience attributes (Dangi et al., 2020a; Dangi et al., 2020b; Massey et al., 2018). Credence attributes (health and environmental benefits, nutritional value, food safety, production process, etc.) are those which consumers may not be able to fully evaluate even after purchase or experience unlike search (price, availability) or experience attributes (taste, freshness) (Massey et al., 2018). The credence nature of the organic food market is characterized by asymmetric (uneven) information distribution from producers/retailers to consumers about production and certification processes (Miralles et al., 2017; Asian et al., 2019). This denotes that organic food consumers make purchase decisions based on asymmetric information. This leaves space for false, misleading and fraudulent claims (or certification labels) by unscrupulous players in the organic food value chain (Thøgersen et al., 2010; Nuttavuthisit and Thøgersen, 2017; Zakowska-Biemans, 2011; Pomsanam et al., 2014). Additionally, the lack of proper knowledge may also limit consumers understanding of accredited third-party organic certification labels. Further, long anonymous supply chains can increase chances of deliberate or accidental contamination during food scares. In this respect, AFIs like organic farmers markets have an added advantage over other types of organic food systems. Organic food farmers markets are temporary market spaces that function under the realm of sharing economy. Farmers collectively hire rather than own the physical space from other entities, thereby utilizing the untapped idle capacity (Asian et al., 2019; Miralles et al., 2017). Often neighboring organic farmers optimize their logistics by

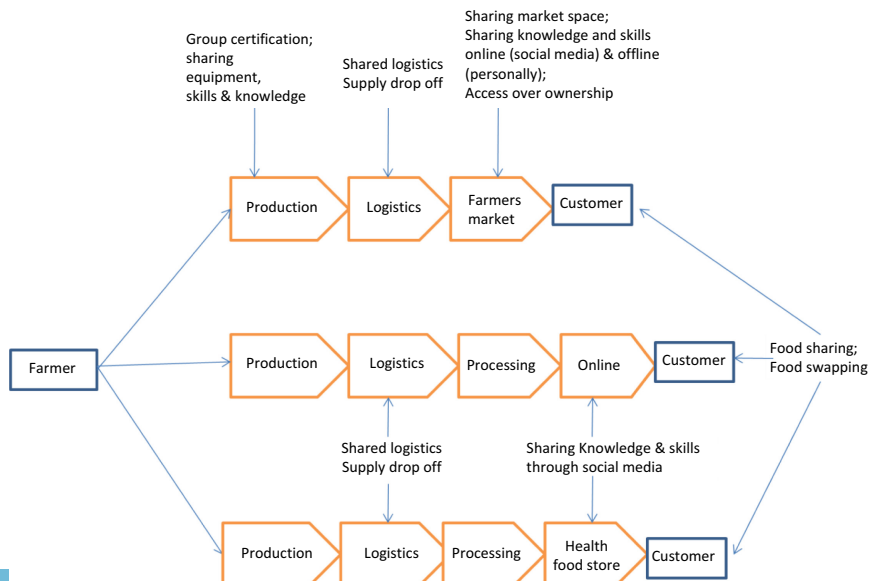


Figure 1. Proposed framework using resource sharing across organic food value chains

sharing transport to increase efficiency. These markets are setup by organic farmers themselves who lack the substantial economic capacity to compete with large organized corporate retailers (Asian *et al.*, 2019). The higher costs associated with organic food production and certification has kept many potential farmers from going organic besides limiting its availability and consumer demand. Limited availability has been observed as an important obstacle for organic food market growth in nascent organic markets like India (Dangi *et al.*, 2020a; Dholakia and Shukul, 2012; Singh and Verma, 2017; Radhika *et al.*, 2012) and other emerging economies (Mohamed *et al.*, 2012; Selvarajah and Geretharan, 2017; Zhu *et al.*, 2013).

Toward, this end, the organic farmers markets employs collaborative economy concepts (Miralles *et al.*, 2017; Botsman and Rogers, 2010; Botsman, 2013) to offer a sustainable solution for strengthening organic food supply from low-income farmers. Participatory guarantee scheme (PGS), an alternative to third-party certification and labeling, is a locally-focused organic certification system. It involves the active participation of all stakeholders (including consumers) through trust, knowledge exchange and social networking. This ensures the transparency and integrity of the organic product and process. PGS is specially adapted to local contexts and short value chains with a lower cost of certification (Bhattarai *et al.*, 2013) incentivizing more farmers to switch to organic especially in emerging economies (IFOAM, 2018). Increased availability will also keep organic food prices competitive and assist in increasing the organic food market.

By following the virtues of sharing economy, organic food farmers markets facilitate the sharing of resources that are scarce and cost-prohibitive, making it accessible to others, be it, suppliers or consumers (Asian *et al.*, 2019; Belk, 2013; Bhattarai *et al.*, 2013). Offering a more level playing field can minimize the risk of market monopoly by a few players. It makes the niche market more accessible by reducing cost and subsequently the price of the products besides supporting the growth of the organic food market. This makes the organic farmers market more equitable and resilient thereby providing upside to everyone that's involved, in their growth over time.

However, the absence of optimum knowledge of organic produce and its certification process will keep certification and labeling exercise ineffective for decision making during purchase. Consumers in previous studies have highlighted the importance of trust in organic certification and labeling (Dangi *et al.*, 2020a, b; Lin *et al.*, 2009; Manuchehr, 2016; Selvarajah and Geretharan, 2017; Vehapi and Dolićanin, 2016; Liang, 2016). Higher trust in organic food labels can also overcome consumer resistance to premium price (Wu *et al.*, 2011). Nevertheless, individual affordability can still constrain purchase intention (Singh and Verma, 2017; Maruyama and Truing, 2007; Sirieix *et al.*, 2011; Narula and Desore, 2016) beyond a certain price point (Seegebarth *et al.*, 2016). Over here, the likely higher trust capital available in organic farmers markets serve as a bridge to clear their doubts since these market spaces facilitate the personal interaction of producers and consumers.

The importance of various reference groups that influence consumers in their purchase decisions cannot be overlooked. Subjective influence through various reference groups like peers, friends, family members, farmers, retailers, important people (in life) and opinion leaders have been documented before in organic food studies (Dangi *et al.*, 2020a; Pomsanam *et al.*, 2014; Singh and Verma, 2017; Thøgersen *et al.*, 2010). Existing fellow organic consumers, opinion leaders, organic farmers and retailers can influence a person's decision by clarifying their doubts. The proliferation of social media platforms (like Twitter, WhatsApp, Facebook, etc.) across different demographic profiles has increased social connectivity among people. Social media has become a cost-effective platform for organic food marketers or influencers to inform, persuade or remind people about the philosophy and benefits of organic food. Facts are discussed, experiences are shared and myths are busted. Consumers can share reviews of farmers, retailers and products with others and update their knowledge.

Similarly, organic food sellers/retailers can share news, articles related to the industry to create interest and advertise their products. These online transactions and interactions strengthen and often facilitate offline interactions in the organic market places. Organic farmers markets also put a face to organic food since most food supply chains are long and anonymous. Personal interactions among consumers and between consumers and producers/suppliers reinforce beliefs of buyers. These beliefs are likely to translate into stronger trust between buyers and sellers. Trust can change buying behavior (Dangi *et al.*, 2020a; Narula and Desore, 2016). Potential customers may be convinced to overcome the price barrier and try organic food. Existing consumers could buy more and more often. The collaborative economy in organic food markets is founded on trust, influence and reputational index (Botsman and Rogers, 2010; Botsman, 2013). Consumers discuss and share the reputational index of various producers, retailers and products influencing each other as well as suppliers.

The organic food markets can also be discussed from an emerging concept called food hubs (Berti and Mulligan, 2016). Like farmers markets, food hubs also offer aggregation of logistics, distribution and marketing to small and medium-scale producers (Matson *et al.*, 2014; Berti and Mulligan, 2016). It is a type of hybrid market that overcomes the limits of traditional alternative agri-food markets to scale up. However, they attempt to move beyond the concept of direct markets (like farmers markets) for consumers to also serving mass markets by including wholesaling to institutional buyers like supermarkets, food service vendors, etc. (Crabtree *et al.*, 2012; Berti and Mulligan, 2016; Matson *et al.*, 2014). As a result, food hubs tend to suffer from the tradeoffs between environmental goals, economic equity and social justice (Franklin *et al.*, 2011). Thus, it appears that food hubs may not offer the same scope of sharing resources, both tangible and intangible, and ownership across its value chain as farmers markets do.

Farmers markets, on the other hand, are short value chains with short referring to both physical and social distance (producer consumer interaction and sharing information). Information includes origin, production method and sustainability of the product and identities, values and ethics of both consumer and producer (Galli and Brunori, 2013). Thus, organic food markets facilitate exploitation of the untapped social, economic and environmental value of underutilized or idle assets (Miralles *et al.*, 2017).

Practical implications

Producers, retailers and regulators need to focus on building trust and removing knowledge deficit through virtues of sharing economy. Though PGS has been mandated by the regulators in India for domestic and export markets, its awareness among consumers appears to be low vis-à-vis third-party organic certification. Thus, increased awareness should be undertaken by different stakeholders to promote locally-focused organic certification systems like PGS. Suppliers and farmers should dovetail their marketing strategies by concentrating on credence attributes of organic food in their promotional messages for removing or minimizing information asymmetry.

Further organic food markets should also host contests, food festivals and other get-togethers to increase footfalls of potential customers. These social interactions between customers and opinion leaders are likely to improve the trust capital of existing and potential customers. Use social media to increase visibility and address consumers concerns. Further, value chain operations in farmers markets are more sustainable as they utilize principles of sharing economy to a greater extent compared to other market systems. Accordingly, organic farmers markets should build on these strengths for their economic, environmental and social value. Such merits should be communicated to improve consumer confidence and loyalty.

Besides, innovative concepts like blockchain technology can also be employed to increase the traceability and transparency of organic food value chains. Organic farmers can consider community-supported agriculture (CSA) to build a reliable customer base.

Conclusions and implications for future research

Sharing is consumer-oriented, typically peer-to-peer organizations or platforms which normally have an offline dimension. Among all alternative organic food market systems, farmers markets come closest to it. Organic food markets are likely to share more resources, knowledge and skills at various levels of organic food value chain compared to other organic food market systems. Owing to following sharing economy principles closely, they are able to balance environmental goals, economic equity and social justice for their stakeholders more effectively.

Since the organic food market is a credence market, building trust remains paramount. Information asymmetry due to the prevalence of credence attributes in organic food purchase is decreasing institutional trust among consumers (Botsman and Rogers, 2010; Botsman, 2013). The limitation of vertical value chains in addressing these anomalies has led to the creation of new horizontal value chains. Earlier upwards trust flow appears to be now moving sideways through horizontal value chains. By analyzing the organic food markets through sharing economy, perhaps make our findings more realistic. The findings suggest the importance of sharing economy for organic food markets at least in emerging economies since it has the potential to build value, scale and trust more efficiently and effectively. It allows overcoming the prevalent demand and supply constraints in organic food markets. It helps saves money, which increases disposable income and provides a runaway toward more savings and opportunity.

The case studies of this study form part of a growing foundation of research that can be the basis for long-term studies on organic food systems. Future researchers can also study the food waste management concept through food swapping and food sharing as part of sharing economy in the context of an emerging economy. This study can also be extended to explore the viability of food hubs in an emerging nation and its difference from farmers markets for resource sharing and community building. The study is limited to urban conglomerate in one region and may not be a representative sample for India or other emerging economies.

References

- Andrea Blengini, G. and Shields, D. (2010), "Green labels and sustainability reporting: overview of the building products supply chain in Italy", *Management of Environmental Quality*, Vol. 21 No. 4, pp. 477-493.
- Asian, S., Hafezalkotob, A. and Jacob, J.J. (2019), "Sharing economy in organic food supply chains: a pathway to sustainable development", *International Journal of Production Economics*, Vol. 218, pp. 322-338.
- ASSOCHAM (2013), *Rising Demand of Organic Products in Metropolitan Cities*, ASSOCHAM, Delhi.
- ASSOCHAM and EY (2018), "The Indian Organic market: a new paradigm in agriculture", working paper, ASSOCHAM and Ernst & Young, New Delhi, March 21.
- Belk, R. (2007), "Why not share rather than own?", *The Annals of the American Academy of Political and Social Science*, Vol. 611 No. 1, pp. 126-140.
- Belk, R. (2013), "You are what you can access: sharing and collaborative consumption online", *Journal of Business Research*, Vol. 67 No. 8, pp. 1595-1600.
- Berti, G. and Mulligan, C. (2016), "Competitiveness of small farms and innovative food supply chains: the role of food hubs in creating sustainable regional and local food systems", *Sustainability*, Vol. 8, p. 616.

- Bhattacharai, S., Lyne, C., K. M. and Martin, S. (2013), "Assessing the performance of a supply chain for organic vegetables from a smallholder perspective", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 3 No. 2, pp. 101-118.
- Botsman, R. and Rogers, R. (2010), "Beyond Zipcar: collaborative consumption", *Harvard Business Review*, Vol. 88 No. 10, p. 30.
- Botsman, R. (2013), *The Sharing Economy Lacks a Shared Definition*, Fast Company, New York, available at: <http://www.fastcoexist.com/3022028/the-sharing-economy-lacks-a-shared-definition> (accessed 17 March 2019).
- Braw, E. (2014), Free lunch, anyone? Food sharing sites and apps stop leftovers going to waste, *The Guardian*, available at: <https://www.theguardian.com/sustainable-business/free-food-sharing-leftovers-surplus-local-popular> (accessed 7 July 2020).
- Chaudhary, R. and Bisai, S. (2018), "Factors influencing green purchase behavior of millennials in India", *Management of Environmental Quality*, Vol. 29 No. 5, pp. 798-812.
- Choi, T.-M., Guo, S., Liu, N. and Shi, X. (2019), "Values of food leftover sharing platforms in the sharing economy", *International Journal of Production Economics*, Vol. 213, pp. 23-31.
- Crabtree, T., Morgan, K. and Sonnino, R. (2012), *Prospects for the Future: Scaling up the Community Food Sector*, Making Local Food Work, Woodstock, OX.
- Dangi, N. (2015), "Green supply chain management-concept and its relevance in India", in Narang, D. (Ed.), *Emerging Global Economic Perspectives*, Orange Books International, New Delhi, pp. 681-688.
- Dangi, N., Narula, A.S. and Gupta, S.K. (2020a), "Influences on purchase intentions of organic food consumers in an emerging economy", *Journal of Asia Business Studies*, in press, doi: [10.1108/JABS-12-2019-0364](https://doi.org/10.1108/JABS-12-2019-0364).
- Dangi, N., Gupta, S.K. and Narula, S.A. (2020b), "Consumer Buying Behaviour and purchase intention of organic food: a conceptual framework", *Management of Environmental Quality*, in press, doi: [10.1108/MEQ-01-2020-0014](https://doi.org/10.1108/MEQ-01-2020-0014).
- De Toro, A. and Hansson, P.A. (2004), "Machinery co-operatives—a case study in Sweden", *Biosystems Engineering*, Vol. 87 No. 1, pp. 13-25.
- Dholakia, J. and Shukul, M. (2012), "Organic food: an assessment of knowledge of homemakers and influencing reasons to buy/not to buy", *Journal of Human Ecology*, Vol. 37 No. 3, pp. 221-227.
- Edbring, E.G., Lehner, M. and Mont, O. (2016), "Exploring consumer attitudes to alternative models of consumption: motivations and barriers", *Journal of Cleaner Production*, Vol. 123, pp. 5-15.
- Ertz, M., Durif, F. and Arcand, M. (2019), "A conceptual perspective on collaborative consumption", *Academy of Marketing Science Review*, Vol. 9 Nos 1-2, pp. 27-41.
- Escobar-Lopez, S.Y., Espinoza-Ortega, A., Vizcarra-Bordi, I. and Thome-Ortiz, H. (2017), "The consumer of food products in organic markets of central Mexico", *British Food Journal*, Vol. 119 No. 3, pp. 558-574.
- FAO (2013), *Food Wastage Footprint Impacts on Natural Resources*, Summary Report, FAO, Rome, Italy.
- Franklin, A., Newton, J. and Mcentee, J.C. (2011), "Moving beyond the alternative: sustainable communities, rural resilience and the mainstreaming of local food", *Local Environment*, Vol. 11 No. 16, pp. 771-788.
- Galli, F. and Brunori, G. (Eds) (2013), *Short Food Supply Chains as Drivers of Sustainable Development. Evidence Document*, P7 Project Foodlinks (GA No. 265287), Laboratorio di Studi Rurali Sismondi, Pisa, pp. 1-105.
- Gansky, L. (2014), *5 Signs that the Collaborative Economy Is Going through Puberty*, Fast Company, New York, available at: <http://www.fastcoexist.com/3030564/5-signsthat-the-collaborative-economy-is-going-through-puberty> (accessed 4 February 2019).

- Gupta, S.K. and Anand, R.S. (2013), "Development of solar electricity supply system in India: an overview", *Journal of Solar Energy*, Vol. 2013, pp. 1-10.
- Gupta, S.K. and Purohit, P. (2013), "Renewable energy certificate mechanism in India: a preliminary assessment", *Renewable and Sustainable Energy Reviews*, Vol. 22, pp. 380-392.
- Gupta, S.K. and Racherla, U.S. (2016), "Effect of ISO 14000 certification on sustainability: evidence from the Indian leather industry", *The Journal of Social, Political, and Economic Studies*, Vol. 41 No. 1, pp. 34-50.
- Gupta, S.K. and Racherla, U.S. (2018), "Interdependence among dimensions of sustainability", *Management of Environmental Quality: An International Journal*, Vol. 29 No. 3, pp. 406-415.
- Gupta, S.K., Gupta, S. and Gayathiri, S. (2018), "'Pollution prevention' is the key to drive sustainability: preliminary findings from a tannery unit in India", *Management of Environmental Quality*, Vol. 29 No. 3, pp. 416-426.
- Harris, S. (2007), "Does sustainability sell? Market responses to sustainability certification", *Management of Environmental Quality*, Vol. 18 No. 1, pp. 50-60.
- Hegnholt, E., Unnikrishnan, S., Pollmann-Larsen, M., Askelsdottir, B. and Gerard, M. (2018), *Tackling-the-1.6-Billion-Ton-Food-Waste-Crisis*, Boston Consulting Group, Boston, available at: <https://www.bcg.com/publications/2018/tackling-1.6-billion-ton-food-loss-and-waste-crisis.aspx> (accessed 7 July 2020).
- IFOAM (2018), "IFOAM policy brief on: how governments can recognize and support participatory guarantee systems (PGS)", Working Paper, IFOAM – Organics International, Bonn.
- Lernoud, J. and Willer, H. (2018), "Current statistics on organic agriculture worldwide: area, Operators, and Market", in Willer, H. and Lernoud, J. (Eds), *The World of Organic Agriculture. Statistics and Emerging Trends 2018*, FiBL, Frick and IFOAM–Organics International, Bonn.
- Liang, R.D. (2016), "Predicting intentions to purchase organic food: the moderating effects of organic food prices", *British Food Journal*, Vol. 118 No. 1, pp. 183-199.
- Lin, L., Zhouand, D. and Ma, C. (2009), "Green food industry in China: development, problems and policies", *Renewable Agriculture and Food Systems*, Vol. 25 No. 1, pp. 69-80.
- Manucheher, I. (2016), "Modelling consumers' demand for organic food products: the Swedish experience", *The International Journal of Food and Agricultural Economics*, Vol. 4 No. 3, pp. 77-89.
- Martin, C.J. (2016), "The sharing economy: a pathway to sustainability or a nightmarish form of neoliberal capitalism?", *Ecological Economics*, Vol. 121, pp. 149-159.
- Martinez, F. (2012), "The syncretism of environmental and social responsibility with business economic performance", *Management of Environmental Quality*, Vol. 23 No. 6, pp. 597-614.
- Maruyama, M. and Trung, L.V. (2007), "Traditional bazaar or supermarkets: a profit analysis of affluent consumer perceptions in Hanoi", *International Review of Retail Distribution and Consumer Research*, Vol. 17 No. 3, pp. 233-252.
- Massey, M., O'Casey, A. and O'tahal, P. (2018), "A meta-analytic study of the factors driving the purchase of organic food", *Appetite*, Vol. 125, pp. 418-427.
- Matson, J., Shaw, J. and Thayer, J. (2014), "Food hubs: an evolution of the Co-op business model", *Rural Cooperatives*, Vol. 81, pp. 4-10.
- Miralles, I., Dentoni, D. and Pascucci, S. (2017), "Understanding the organization of sharing economy in agri-food systems: evidence from alternative food networks in Valencia", *Agriculture and Human Values*, Vol. 34 No. 4, pp. 833-854.
- Mohamed, M.A., Chymis, A. and Shelaby, A.A. (2012), "Determinants of organic food consumption in Egypt", *International Journal of Economics and Business Modeling*, Vol. 3 No. 3, pp. 183-191.
- Nandi, R., Bokelmann, W., Gowdru, N.V. and Dias, G. (2017), "Factors influencing consumers' willingness to pay for organic fruits and vegetables: empirical evidence from a consumer survey in India", *Journal of Food Products Marketing*, Vol. 23 No. 4, pp. 430-451.

- Narula, S.A. (2009), *ICT Enabled Food Supply Chains*, Vol. 7, I4donline Publication, Noida, 7, pp. 29-31.
- Narula, S.A. (2017), "Revolutionizing food supply chains of Asia through ICTs", in Bhat, R. (Ed.), *Sustainability Challenges in the Agrofood Sector*, Wiley-Blackwell, Oxford, pp. 212-226.
- Narula, S.A. and Dangi, N. (2014), "Linking local suppliers to global food markets: a critical analysis of food safety issues in developing countries", in Bhat, R. and Gomez-Lopez, V.M. (Eds), *Practical Food Safety: Contemporary Issues and Future Directions*, Wiley-Blackwell, Oxford, pp. 83-96.
- Narula, S.A. and Desore, A. (2016), "Framing green consumer behaviour research: opportunities and challenges", *Social Responsibility Journal*, Vol. 12 No. 1, pp. 1-22.
- Nuttavuthisit, K. and Thøgersen, J. (2017), "The importance of consumer trust for the emergence of a market for green products: the case of organic food", *Journal of Business Ethics*, Vol. 140 No. 2, pp. 323-337.
- Oswald, N. (2013), *Organic Food Markets in Urban Centers of India*, International Competence Centre for Organic Agriculture (ICCOA), Bangalore.
- Ozoliņa, L. and Rošā, M. (2013), "The consumer's role in energy efficiency promotion in Latvian manufacturing industry", *Management of Environmental Quality*, Vol. 24 No. 3, pp. 330-340.
- Pomsanam, P., Napompech, K. and Suwanmaneepong, S. (2014), "Factors driving Thai consumers' intention to purchase organic foods", *Asian Journal of Scientific Research*, Vol. 7 No. 4, pp. 434-446.
- Radhika, P., Ammani, P. and Seema, R. (2012), "Eating healthy-consumer perception of organic foods in twin cities", *Journal of International Marketing*, Vol. 1 No. 2, pp. 67-72.
- Sahota, A. (2018), "The global market for organic food and drink", in Willer, H. and Lernoud, J. (Eds), *The World of Organic Agriculture. Statistics and Emerging Trends 2018*, FiBL, Frick and IFOAM – Organics International, Bonn.
- Schanes, K. and Stagl, S. (2019), "Food waste fighters: what motivates people to engage in food sharing?", *Journal of Cleaner Production*, Vol. 211, pp. 1491-1501.
- Schlagwein, D., Schoder, D. and Spindeldreher, K. (2019), "Consolidated, systemic conceptualization, and definition of the sharing economy", *Journal of the Association for Information Science and Technology*, Vol. 71 No. 7, pp. 817-838.
- Schlatter, B., Trávníček, J., Willer, H. and Lernoud, J. (2020), "Organic agriculture worldwide: current statistics", in Willer, H., Schlatter, B., Trávníček, J., Kemper, L. and Lernoud, J. (Eds), *The World of Organic Agriculture. Statistics and Emerging Trends 2020*, FiBL, Frick and IFOAM – Organics International, Bonn, pp. 31-69.
- Schor, J.B. and Cansoy, M. (2019), "The sharing economy", in Wherry, F.F. and Woodward, I. (Eds), *The Oxford Handbook of Consumption*, Oxford University Press, New York.
- Schor, J.B., Fitzmaurice, C., Carfagna, L.B., Attwood-Charles, W. and Poteat, E.D. (2016), "Paradoxes of openness and distinction in the sharing economy", *Poetics*, Vol. 54, pp. 66-81.
- Seegebarth, B., Behrens, S.H., Klarmann, C., Hennigs, N. and Scribner, L.L. (2016), "Customer value perception of organic food: cultural differences and cross-national segments", *British Food Journal*, Vol. 118 No. 2, pp. 396-411.
- Selvarajah, K. and Geretharan, T. (2017), "Organic food consumption among urban consumers in batticaloa district, Sri Lanka", *International Journal of Food Safety, Nutrition, Public Health and Technology*, Vol. 9 No. 1, pp. 1-6.
- Singh, A. and Verma, P. (2017), "Factors influencing Indian consumers' actual buying behaviour towards organic food products", *Journal of Cleaner Production*, Vol. 167, pp. 473-483.
- Sirieix, L., Kledal, P.R. and Sulitang, T. (2011), "Organic food consumers' trade-offs between local or imported, conventional or organic products: a qualitative study in Shanghai", *International Journal of Consumer Studies*, Vol. 35, pp. 670-678.
- Svensson, G. and Wagner, B. (2015), "Implementing and managing economic, social and environmental efforts of business sustainability: propositions for measurement and structural models", *Management of Environmental Quality*, Vol. 26 No. 2, pp. 195-213.

- Teoh, C. and Gaur, S. (2019), "Environmental concern: an issue for poor or rich", *Management of Environmental Quality*, Vol. 30 No. 1, pp. 227-242.
- Thøgersen, J., Haugaard, P. and Olesen, A. (2010), "Consumer responses to ecolabels", *European Journal of Marketing*, Vol. 44 Nos 11/12, pp. 1787-1810.
- Vehapi, S. and Dolićanin, E. (2016), "Consumers behaviour on organic food: evidence from the Republic of Serbia", *Economics of Agriculture*, Vol. 63 No. 3, p. 871.
- Wu, L., Xu, L. and Gao, J. (2011), "The acceptability of certified traceable food among Chinese consumers", *British Food Journal*, Vol. 113 No. 4, pp. 519-534.
- Zakowska-Biemans, S. (2011), "Polish consumer food choices and beliefs about organic food", *British Food Journal*, Vol. 113 No. 1, pp. 122-137.
- Zhu, Q., Li, Y., Geng, Y. and Qi, Y. (2013), "Green food consumption intention, behaviours and influencing factors among Chinese consumers", *Food Quality and Preference*, Vol. 28 No. 1, pp. 279-286.

Further reading

- Chen, M.F. (2007), "Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: moderating effects of food-related personality traits", *Food Quality and Preference*, Vol. 18 No. 7, pp. 1008-21.
- Fotopoulos, C. and Krystallis, A. (2002), "Organic product avoidance reasons for rejection and potential buyers identification in a countrywide survey", *British Food Journal*, Vol. 104 No. 9, pp. 730-765.
- Joshi, Y. and Rahman, Z. (2016), "Predictors of young consumer's green purchase behaviour", *Management of Environmental Quality*, Vol. 27 No. 4, pp. 452-472.
- Maichum, K., Parichatnon, S. and Peng, K.C. (2016), "Application of the extended theory of planned behaviour model to investigate purchase intention of green products among Thai consumers", *Sustainability*, Vol. 8, p. 1077.
- Soyez, K., Francis, J.N.P. and Smirnova, M.M. (2012), "How individual, product and situational determinants affect the intention to buy an organic food buying behaviour: a cross-national comparison in five nations", *Der Market*, Vol. 51 No. 1, pp. 27-35.

Corresponding author

Sapna A. Narula can be contacted at: narulasapna@gmail.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.