



## **Investigating the Market Implications of the Farm-to-Fork Model in Vidarbha's Retail Sector: An Analytical Study**

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### **Abstract**

This paper examines market implication of farm-to-fork model within Vidarbha retail sector on effects on the primary objective, which is the efficiency of procurement, transmission of price, retail operation and consumer satisfaction. The study investigates the effects of shorter supply chains on operational effectiveness, product freshness and stakeholder benefits using a descriptive research design and primary data obtained on 200 respondents, comprising of farmers, retailers and consumers. The study has shown that farm-to-fork model will shrink intermediaries, boost traceability, boost retailer margins and improve consumer trust. The farmers also enjoy enhanced price realizations and source linkages assured having made infrastructural bottlenecks like undeveloped cold-chain facilities one of the main impediments. In general, the paper demonstrates that the model has a potential to design more transparent, efficient, and sustainable food systems in Vidarbha and recommends specific investment and institutional empowerment to make the model more effective.

**Keywords:** Farm-to-Fork Model, Vidarbha, Retail Sector, Supply Chain Efficiency, Price Transmission, Traceability, Direct Procurement, Consumer Satisfaction, Farmer Welfare, etc.

### **Introduction:**

Sometimes referred to as short food supply chains (SFSCs), farm-to-fork is a phenomenon that is also receiving growing interest as a tool to improve the efficiency, sustainability, and transparency of the food system (Jia, 2024). This model is also taking shape in India as one of the strategic ways of enhancing the marketing systems in the horticultural industry, particularly in areas with structural supply-chain bottlenecks like Vidarbha. A study on the supply chains of Indian perishable produce suggests that lengthy marketing channels are also given a lot of responsibility in post-harvest loss, price distortions, and low-farmers margins (Boiteau et al., 2022). The challenges are very applicable in the case of Vidarbha where bad cold-chain connectivity and too much middlemen intermediation are issues that impact both the producers and retailers. It was estimated in a study of horticultural farm crops in the area that only a limited percentage of the farmers, about one out of every ten, use direct marketing or farm-to-table arrangements, which is an indication that the region can integrate more (Agricultural Science Digest, 2022).

At the same time, there is a transformation of retail environment in vidarbha. The demand of urban consumers towards fresher, traceable and sustainably sourced produce is rising and can also be seen in large urban markets (IJPREAMS, 2024). It has been observed that suppliers involving direct procurement pattern have higher product differentiation, quality consistency, and customer satisfaction, but there are difficulties in the scaling up procurement and constant supply (Rani, 2025). The COVID-19 pandemic also made long-food chains more vulnerable, which supported the argument about more localized procurement and distribution paradigms (Vyas et al., 2021).

It is against this context that the current study explores the market implication of the farm to fork model in the retail market in Vidarbha in the aspects of its effects on efficiency in procurement, transmission of prices, freshness of the products, margins of the retailer, and the satisfaction of consumers. The study will combine the study of the supply-chain and regional value-chain research as well as the literature on consumer behaviour to assess the potential of the short chains in improving market performance and promoting more equal and efficient food systems in Vidarbha.

### **Literature Review:**

Academic sources on the topic of short order food supply chains are focused on stating the fact



that it could empower the economic system of a specific region, enhance traceability, and decrease the ecological footprint (Jia, 2024). Direct procurement models in the Indian context were demonstrated to cause a notable decrease in the losses after harvest and enhance the efficiency of the logistic system, in particular perishable goods (Boiteau et al., 2022). It has been shown that shorter chains lower the levels of handling and thereby limits spoilage, enhancing the quality of products at retail level (Rani, 2025). The degree of these things varies however, depending on the type of commodity; the products with the shortest shelf life, like leafy vegetables, demand more investment in cold-chain technology to be effectively integrated into food system combining farms and market (Jia, 2024).

In deserts and Vidarbha, value-chain analyses indicate that it has a lot of inefficiencies. In a regional evaluation, it was established that horticultural farmers incur high costs in marketing, rely on intermediaries, inaccessibility to storage and grading service facilities, leading to serious leakages in supply chain (Agricultural Science Digest, 2022). These results are consistent with the national research stating the structure as the obstacle to farmers using direct marketing channels wholesomely (Boiteau et al., 2022). The application of FPO-based aggregation and digital procurement solution is also rather limited, which further limits the success of farm-to-fork initiatives in Vidarbha (Rani, 2025).

Consumer-related sources reveal another tendency, as well, which is the preference towards freshness, traceability, and sustainable sourcing. Urban city research results indicate that consumers are ready to be charged a higher price based on guarantee quality and sourcing transparency (IJPREMS, 2024). The benefits of retailers who have adapted the models of direct sourcing are improvements in shelf life, less shrinkage, and greater customer loyalty but the disadvantages include fluctuating volumes and high-coordination costs (Rani, 2025).

The policy and resilience perspectives highlight the significance of the localized supply chains in the times of disruption. The pandemic proved that the difference between short chains and long chains is that the former can be more resilient and simultaneously provide faster resourcing changes and local distribution (Vyas et al., 2021). Researchers, however, claim that these kinds of systems need the support of the favorable public policies, cold-chain infrastructure investments, and fortification of the farmer institutions to have a lasting effect (Jia, 2024).

Altogether, the literature indicates that the farm-to-fork model has a potential of improving market efficiency and farmer welfare, yet success of this model in Vidarbha regarding infrastructure development, institutional factors, and retailer-farmer alignment is possible.

### **Objectives:**

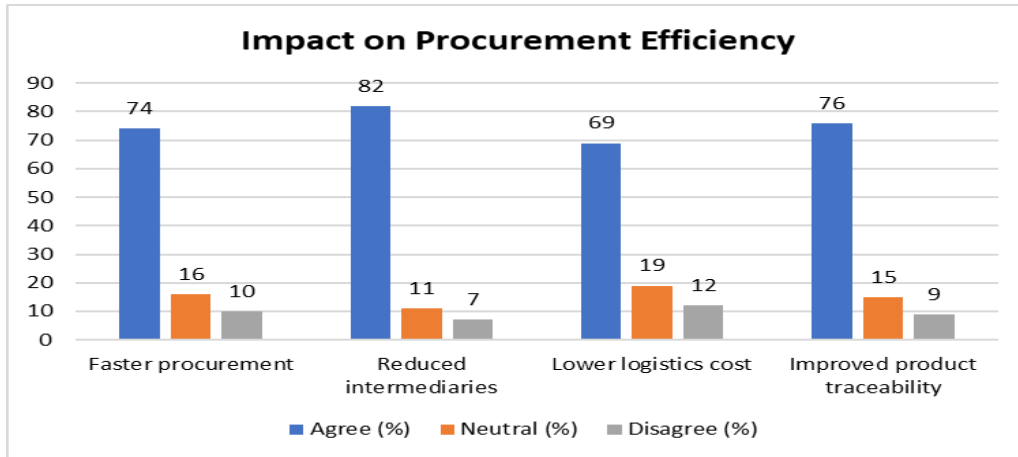
The paper will also analyze the implication of the farm to fork model in the Vidarbha context through evaluating its impact on the efficiency in procurement, price transmission, margin in retailers, product freshness, and satisfaction of consumers. It is also aimed at assessing infrastructural, institutional, and behavioural determinants that help in assessing the adoption and other performance of farm-to-fork practices in the region.

### **Methodology:**

The research design is the descriptive research design in that the study methodically studies the market implications of the farm-to-fork model in Vidarbha. A structured questionnaire was used to gather primary data by means of subjecting the respondents to the questionnaire in their respective locations in the retail value chain. Stratified random sampling with a sample of 200 individuals (traders, consumers and farmers) was used to make sure that all the stakeholder groups would be represented equally.

### **Results and Discussion:**

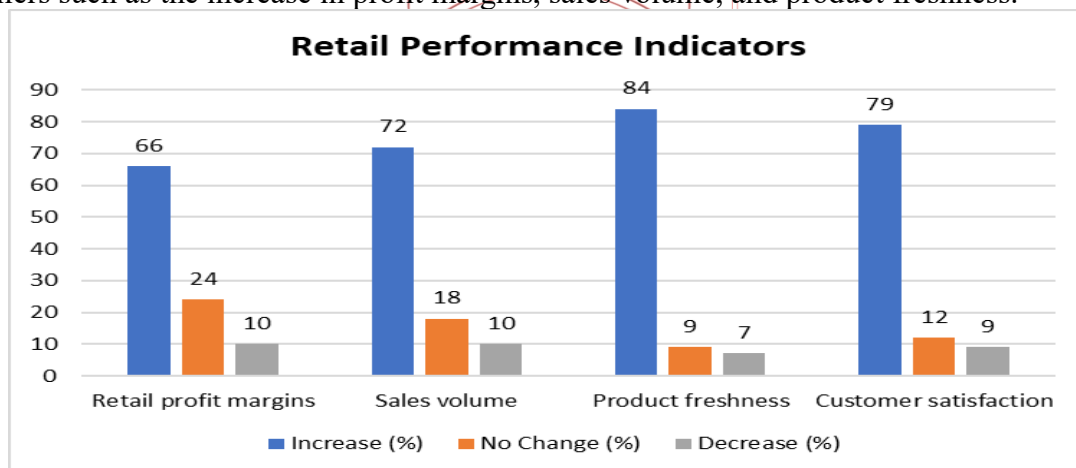
Responses of 200 participants who included 60 farmers and 70 retailers and 70 consumers were analysed to determine the market implication of the farm-to-fork model in Vidarbha. It has analyzed in terms of procurement efficiency, quality of products, transmission of prices, and customer satisfaction. Response patterns were interpreted with the help of descriptive statistics.



**Fig. 1 Impact on Procurement Efficiency**

Majority of the respondents (82% responded that the farm-to-fork model lessens the middlemen, which implies more direct relationships between farmers and retailers. The fact that there is an improved procurement speed (74%), and traceability (76) has indicated that shorter chains have indeed increased transparency and efficiency in operations.

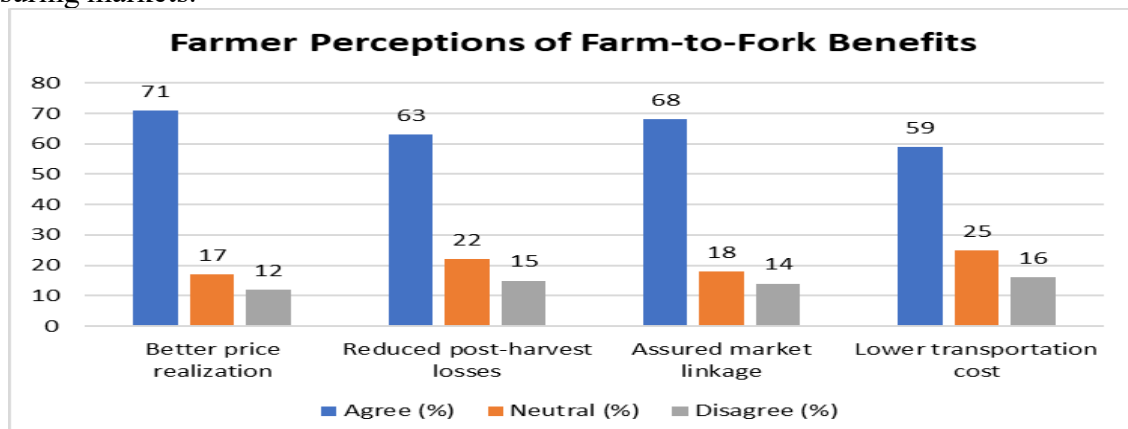
The decrease of wastage and an increase in the product turnover were seen to positively impact retailers such as the increase in profit margins, sales volume, and product freshness.



**Fig. 2 Impact on Retail Performance**

The statistics show that 84 percent of retailers indicated better product freshness which has culminated in better customer satisfaction (79 percent). These higher sales volumes (72 percent) indicate that the implementation of farm-to-fork has a positive effect on the demand of the market and the competitiveness of the retail outlets.

Direct purchasing enhanced the farmers to realize better prices by removing the middlemen, assuring markets.



**Fig. 3 Farmer-Level Outcomes**



Farmers expressed a unanimous agreement (71%), to the fact that they get better prices through farm-to-fork models. Nevertheless, the percentage of the agreement on the reduction of transport costs is lower (59) and implies that the entity may require better logistic support. There was a high preference among the consumers to fresher produce and traceability that is offered to the consumers through the direct sourcing practices.

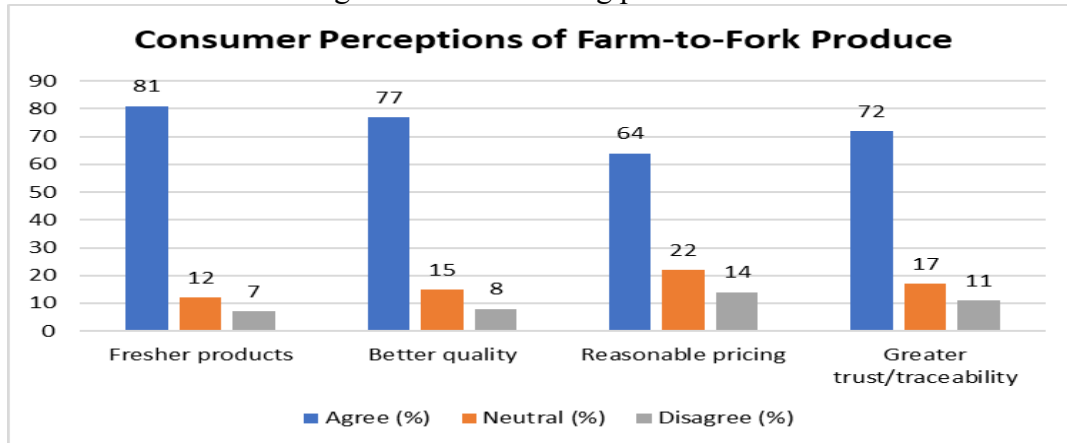


Fig. 4 Consumer's Perception

Although 81 percent of the respondents saw farm-to-fork produce as fresher and more desirable, only 64 percent believed that it was fairly priced, which means that the aspect of cost competitiveness still requires enhancement to make them more acceptable.

In all of the stakeholder groups, the farm-to-fork model showed a positive impact on efficiency of procurement, product quality, retail performance and farmer income. The quantitative computation illustrates eminently that the model has the capacity of optimizing the supply chains and improving the market performance in Vidarbha. Nevertheless, special attention is needed to the areas like logistics infrastructure, pricing strategy, and the direct linkages scaling as it is the only way to achieve the long-term sustainability.

#### Conclusions:

The discussion reveals clearly that the farm-to-fork model can be used to improve the effectiveness and performance of the retail sector in Vidarbha significantly. All value chain participants, including farm, retail, and consumers, indicated that they improved the speed of procurement, lessened the level of reliance on intermediaries, produced increased freshness of products, and considered increased levels of satisfaction. Retailers enjoyed rise in sales volumes, better margins and farmers enjoyed better price realization and better assured market linkages. Farm-to-fork produce was also felt to be fresher and more reliable by the consumers, since it had better traceability. In general, the results indicate that shorter supply chains are associated with higher levels of transparency, less wastage, and market dynamics. Nonetheless, the comprehensive value of the model is achievable only when it relates to the remedy of the gaps in the infrastructures especially in storage and transportation, as well as cold-chain systems.

#### Recommendations:

To make the farm-fork model more sustainable and facilitated by the adoption of the farm-to-fork model in Vidarbha, it is suggested to implement a series of measures. In the first place, more attention should be paid to the investment in cold-chain infrastructure, pre-cooling units, refrigerated transportation, and decentralized storage to minimize the perishability and enhance the shelf life of the products. Second, there should be increased aggregation and bulk supply of farmers through organizing them into stronger Farmer Producer Organizations (FPOs) to boost farmers bargaining power. Third, online tools that facilitate real-time communication, ordering, and transparency of prices are to be encouraged to facilitate business transactions between retailers and farmers. Fourth, the retailers need to consider implementing uniformity and dependability in quality grading and procurement practices across supply chains. Finally, the policymakers must enable farm-to-fork programs using incentives, training, and market





reform that will ensure direct procurement. The adoption of these suggestions will be an effective way of ensuring that the model has very rapid effects on retail efficiency, farmer welfare, and consumer satisfaction in Vidarbha.

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