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# **SYMBIOSIS INSTITUTE OF OPERATIONS MANAGEMENT NASHIK**

## **Live Project**



*Seeding goodness*

### **Market Research for Frozen Food**

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*Preface List of abbreviations*

Abbreviations	Meaning
B2B	Business to Business
B2C	Business to Consumer
R2C	Ready to Cook
R2E	Ready to Eat

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## *Introduction*

In today's fast-paced world, the convenience of ready-to-eat and ready-to-cook frozen food has become increasingly appealing to consumers. The frozen food industry has witnessed a remarkable transformation, evolving from a niche market to a significant player in the global food industry. Sahyadri Farms is poised to tap into this burgeoning sector and establish a strong foothold in the market for frozen products in Nashik. To navigate this dynamic and competitive landscape, it is essential to gain comprehensive insights into the distribution models, infrastructure, and supply chain dynamics within the frozen food industry.

Our research endeavors to explore the multifaceted aspects of the frozen food industry, focusing on key components that underpin its successful operation. This study will delve into the distribution models employed by industry players, including producers, distributors, and retailers as well as competitors of Sahyadri and big players like McCain, Mother Dairy, medium cap and small cap companies that are successful in frozen foods with their distribution models are analyzed and suggesting 3-4 models and explaining which would be the better model for Sahyadri and why.

At the core of the frozen food industry are the production facilities, storage capacities, and transportation networks that facilitate the seamless supply of products to the end-consumer. This research will dissect the infrastructure employed by market leaders and emerging players to gain valuable insights and how Sahyadri Farms can use their existing infrastructure for a competitive advantage.

Margin levels play a pivotal role in the profitability of businesses along the frozen food supply chain. Thus, our study will scrutinize the margin expectations and strategies utilized by distributors and retailers. Understanding the economics of this industry will enable to suggest Sahyadri Farms to make informed decisions on pricing, distribution, and partnerships

To succeed in the frozen food market, it is essential to cater to the expectations of retailers. This research will investigate what retailers seek from suppliers, including product quality, pricing strategies, marketing support, and demand forecasting. By aligning its offerings with these expectations by research on large cap, medium cap, small cap frozen food industry can help Sahyadri Farms to analyze and establish mutually beneficial partnership with retailers.

The consumer's perspective is a critical component in this study. We will conduct surveys, market research, and data collection to discern consumer expectations for frozen food products. Understanding what consumers value in terms of taste, variety, and convenience will guide product development and marketing strategies, helping Sahyadri Farms to tailor its offerings to local preferences.

## *Literature Review*

This literature review aims to explore various distribution models and consumer expectations in the ready-to-eat and ready-to-cook frozen food industries. Literature Review Distribution Models in the Frozen Food Industry: The distribution models used in the frozen food industry play a crucial role in ensuring that frozen products reach consumers in a timely and efficient manner. Research by Ahumada and Villalobos provides a comprehensive overview of the agro-food supply chain, which includes the frozen food sector (Kumar et al., 2021). Their study highlights the importance of optimizing distribution networks to minimize transportation costs and reduce product wastage. Additionally, Zhang and Chen propose a solution to the Vehicle Routing Problem with Time Windows in multi-product frozen food distribution. They consider factors such as unit volume, price, and perishable coefficient to develop an optimal distribution model.

Another study by Hsu and Chen focuses on analysing a joint food distribution system operation strategy to the Vehicle Routing Problem with Time Windows of food delivery (Jiang et al., 2018). Their research emphasizes the need for effective coordination and collaboration among different players in the distribution network to improve overall efficiency and cost-effectiveness. Moreover, Song and Ko consider various types of vehicles to distribute perishable products in the Agri-products industry. They formulate the problem as a mixed integer nonlinear programming model, aiming to find the most efficient distribution routes and vehicle allocation to minimize costs. Consumer Expectations in the Frozen Food Industry: Alongside distribution models, meeting consumer expectations is critical for success in the frozen food industry. Research by Di et al. examines the redesign of existing supply chains to optimize distribution planning (Bhatia & Bhat, 2020). Their study emphasizes the importance of considering product quality, pricing strategies, marketing support, and demand forecasting to meet retailer expectations. Furthermore, Li Chang et al. comprehensively considers the delivery cost and food freshness in the context of perishable food distribution. They propose a multi-objective distribution model that incorporates time window constraints and vehicle load constraints to ensure both cost-efficiency and product freshness (Li & Gao, 2023). Overall, the literature review reveals that there is a growing emphasis on optimizing distribution networks in the frozen food industry.

Customer survey conducted by “**Godrej Yummies**”

Safety, Technology, Taste, Ease & Mood Uplifter (STTEM) to be the five pillars that will drive India’s preference of snacks.

Total All India Sample: 2815 RESPONDENTS

**Gender ratio:**

50%-Male

50%-Female

Fig 1. Gender Ratio

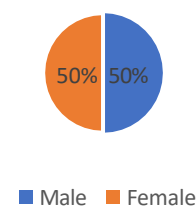




Fig 2. Geographic Representation

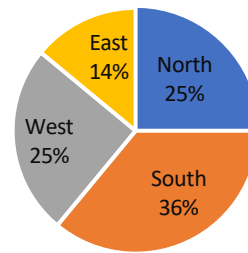
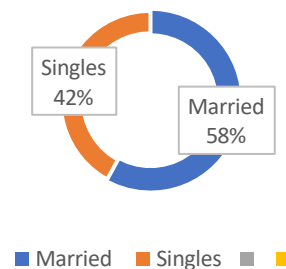


Fig 3. Marital Status



■ Married ■ Singles ■

Fig.4 Age Group

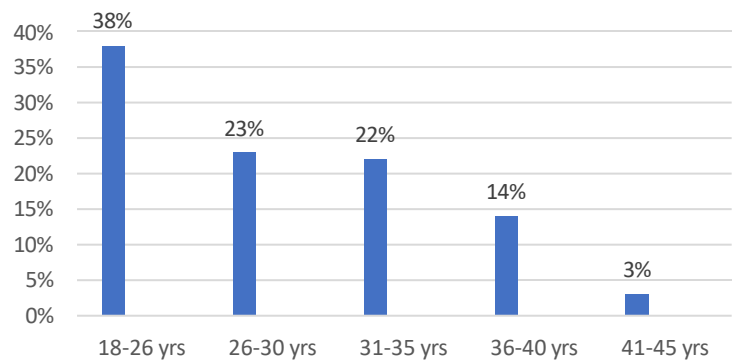
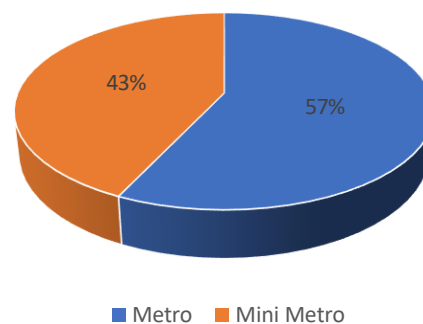


Fig. 5 Area Wise



### Geographic Representation:

25%-North

36%-South

25%-West

14%-East

### Marital status

42%-Single

58%-Married

### Age group

38%-18-26 yrs.

23%-26-30 yrs.

22%- 31-35 yrs.

14%- 36-40 yrs.

03%- 41-45 yrs.

### Area wise

57%- metro

43%- mini metro

Results of the STTEM test of Godrej Frozen foods:

### **I. SAFETY – Hygienic Preparation and Use of Preservatives**

1. 62% Indians actually limit their snacking consumption because they believe there is presence of preservatives
2. 51% Indians feel less guilty to consume preservative-free frozen snacks
3. 55% parents feel guilty as they feel frozen snacks contain preservatives
4. 52% women will consume more frozen snacks if they are preservative-free
5. 52% Indians prefer frozen snacks as they feel it is more hygienic

### **II. TECHNOLOGY – Individual Quick Freezing (IQF) Technology**

1. 53% Indians could recall they have heard of IQF technology (Delhi and Kolkata ranked amongst the top two cities)
2. 17% could further manage to explain what IQF stands for
3. 60% women recalled IQF technology better as compared to 46% men

### **III. TASTE – India's Preference for Potato/Vegetarian Frozen Snacks**

1. 73% Indians feel taste is the biggest reason for snacking
2. 62% Indians feel potato-based snacks is an omnipresent part of their snacking platter
3. 65% Indians prefer vegetarian frozen snacks (North India being the leading region)
4. 65% Indians prefer potato-based snacks (potato bites, samosa, cheese bites, etc.)
5. 41% consume vegetarian frozen snacks daily
6. 39% East and 38% South India prefer non-vegetarian frozen snacks
7. 61% prefer Indian snacks over other options
8. 43% parents believe children like frozen snacks

### **IV. EASE – Convenience of Access, Storage, and Preparation**

1. 51% believe that frozen snacks are easily available and hence make it easier for consumption
2. 50% Indians believe frozen snacks are convenient to cook
3. 44% Indians believe that frozen snacks is easier to prepare by households without house help
4. 55% Indians prefer frozen snacks on special occasions (parties, weekends, etc.)
5. 83% mothers feel frozen snacks are quick-fix hunger solutions for kids
6. 65% Indians confessed to indulging in anytime snacking
7. 76% women snack more often than men
8. 54% working women find snacking convenient for hunger management
9. 52% fathers cook frozen snacks more than mothers

### **V. MOOD UPLIFTER – Correlation of Emotions to Snacking**

1. 55% Indians binge on frozen foods as a mood lifter on various occasions
2. 72% Indians confessed to snacking when they are happy

3. 74% women snack when they are happy
4. 70% men snack when they are happy
5. 60% women snack when they are sad
6. 52% men snack when they are sad

**Fig. 6 Awareness on IQF Technology**

Have you heard or read about IQF (Individual Quick Freeze) technology for frozen snacks?	All India	Mumbai	Pune	Ahmedabad	Delhi	Jaipur	Lucknow	Kolkata	Chennai	Hyderabad	Bengaluru
Yes, have heard or read about it	53	54	41	39	73	42	51	61	50	57	33
No, have never heard about it	47	46	59	61	27	58	49	39	50	43	67

\*The values are in percentage (%).

Have you heard or read about IQF (Individual Quick Freeze) technology for frozen snacks?	Metros	Mini Metros	Male	Female
Yes, have heard or read about it	59	44	46	60
No, have never heard about it	41	56	54	40

### ***Background of Industry***

In 2023, the size of the world market for frozen fruits and vegetables approached 31.97 million tonnes. The market is anticipated to expand at a compound annual growth rate (CAGR) of 5% from 2023 to 2028, culminating in a volume of almost 42.89 million tonnes by 2032.

The growing demand for ready-to-eat foods is driving the global market for frozen fruits and vegetables. Globally, Europe is the leading regional market. These goods are becoming more popular since they have a number of advantages over fresh vegetables. Seasonal convenience and year-round availability are a couple of these advantages. In order to maintain frozen goods for consumption in the future, a variety of methods, including flash and mechanical freezing, are used to help turn the moisture in the products into ice. Additionally, by shielding frozen fruits and vegetables from contamination and moisture penetration, as well as by rendering them inert against microbial deterioration, these methods help retain the nutritional content of frozen produce.

**Based on the kind of product, the market is divided into:**

- Frozen Fruits
- Frozen Vegetables

**Based on the mode of distribution, the market is segmented into:**

- Supermarkets/Hypermarkets

- Independent Retailers
- Convenience Stores
- Online
- Others

### Market Analysis

Customers' hectic work schedules and evolving lifestyles are the main factors driving the global market for frozen fruits and vegetables. This has led to a shift in consumer preference for foods that are simple to prepare, like frozen fruits and vegetables, which cut down on cooking time by not needing to be washed, chopped, or peeled. In addition, the producers are introducing a number of product variations, such as those for potatoes, peas, lentils, raspberries, spinach and strawberries, in an effort to broaden their customer base and expand their product line.

Furthermore, more and more customers are choosing to shop online rather than in-store or conventionally, and they use credit/debit cards to pay for their purchases, which removes regional restrictions and accelerates market expansion. Accordingly, the industry for frozen fruits and vegetables is expanding thanks in part to the success of online retail firms. Moreover, rising middle-class incomes have given customers more power to choose fast food items, particularly in Asia Pacific nations like China and India. This has further accelerated the growth of the business.

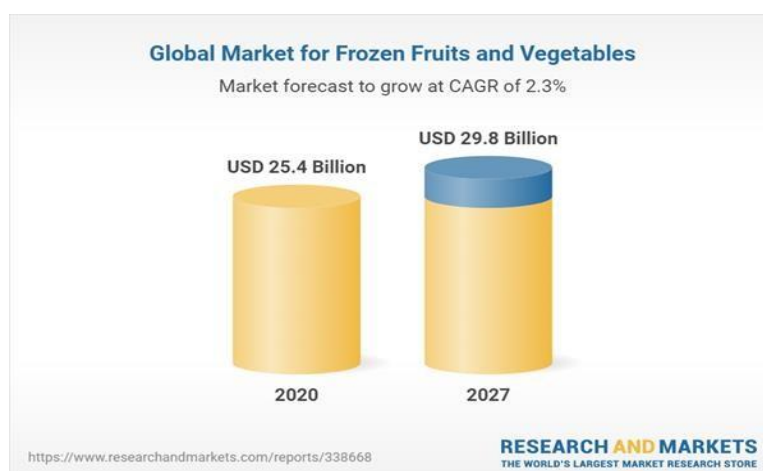


Fig. 7 Global Frozen Market

### Indian Frozen Food Industry

With a projected value of INR 42.7 billion in 2021 and a compound annual growth rate (CAGR) of almost 17% from 2020 to 2025, the Indian frozen foods market is expected to reach INR 93.8 billion. Over the previous five years, there has been a quicker growth rate in the frozen food sector, which includes frozen snacks, frozen fruits and vegetables, frozen meat, poultry, and seafood, and frozen meals. The acceptability of frozen food in India is a result of the significant increase in millennial consumers choosing convenience meals in the semi-urban and urban sectors. The number of working women in India has increased recently, which has led to a rise in the

market for handy forms like frozen dinners.

### Important frozen food markets in India

At INR 29.08 million, the foodservice category leads the frozen food industry as a whole. It is principally driven by the organised restaurant chain industry, which is expanding at a rate of 23% YoY and includes Pizza Hut, Domino's, McDonald's, KFC, and others. Frozen food sales at retail make up 32 percent of the whole frozen food business.

In India, about 85% of the frozen food business is made up of frozen meat, fish, and vegetables. The frozen snack market is being driven by consumer preferences for frozen potato fries and nuggets. Companies have been forced to create more Indian variations of frozen foods including samosas, cutlets, kebabs, and parathas due to the traditional Indian taste palates.

The restaurant industry was significantly influenced by COVID-19, which increased demand for frozen meals. The second-largest section is frozen veggies, which are expanding as a result of seasonal vegetables being available in frozen form all year round. Eighty percent of the demand for frozen food comes from urban regions. Frozen meat and seafood are not very popular in the country, although they are increasing at a 10% annual rate. The frozen food market is dominated by North India, which holds a substantial 40% share, followed by West India (30%) and East India (10%).

### Market Competition

Few businesses dominate the frozen food market, and the top four corporations own more than 50% of the market share in the retail sector. As a result, the frozen food industry is extremely consolidated. The major participants include Darshan Foods, Innovative Foods, Venky's India, Mother Dairy Fruits and Vegetables, Al Kabeer, and McCain Foods India. The quick service restaurant industry, which accounts for the majority of the foodservice market, has a restricted number of permitted suppliers for frozen food items, making the industry even more concentrated.

These players can be divided into three categories based on their business models: (i) International companies' Indian subsidiaries, like McCain India and Al Kabeer; (ii) vertically integrated businesses, like Venky's and Mother Dairy; and (iii) Indian companies that specialise in frozen foods, like Innovative Foods, Darshan Foods, and Oceanic Edibles International. Frozen food is becoming more and more popular; thus, many businesses are concentrating on increasing from a regional to a national presence. For instance, in the next two to three years, the Kolkata-based startup Keventer wants to open a frozen foods storefront across the country. Large companies like ITC have introduced new products and increased the distribution of their frozen foods in recent years.

Ten years ago, the exorbitant cost of frozen food and the false belief that it is not fresh led to customers rejecting it. But customers are now more health conscious and aware than they were a few years ago. Changes in consumer preferences after the pandemic are likely to make frozen foods more acceptable, which will completely change the frozen food market in India. It is expected that more players and additional investments would enter this market as cold chain infrastructure and logistics improve.



Fig. 8 Indian Frozen Food Industry

The frozen fruit and vegetable industry is a vital and thriving segment within the global food industry. This industry plays a crucial role in providing convenient and nutritious food options to consumers around the world.

Here is an in-depth overview of the frozen fruit and vegetable industry:

**Growth and Significance:** The frozen fruit and vegetable industry has experienced robust growth in recent years. This growth is primarily driven by consumers' increasing demand for convenient, healthy, and readily available food options. As lifestyles become busier and people become more health-conscious, the appeal of frozen fruits and vegetables has grown significantly.

**Market Size and Segmentation:** The market for frozen fruits and vegetables is substantial, offering a diverse array of products. These include single-ingredient frozen fruits and vegetables, mixed blends, and ready-to-

cook options. Product segmentation within the industry includes categories like berries (e.g., strawberries, blueberries), citrus fruits (e.g., oranges, lemons), tropical fruits (e.g., mangoes, pineapples), root vegetables (e.g., potatoes, carrots), and green vegetables (e.g., peas, spinach).

**Health and Nutrition:** Frozen fruits and vegetables are highly regarded for their nutritional value. They are often considered to retain more nutrients than their fresh counterparts. This is because they are typically frozen shortly after harvesting, preserving essential vitamins and minerals. The freezing process locks in the nutritional content, making these products a convenient and reliable source of vital nutrients.

**Convenience:** Convenience is one of the primary drivers of the industry's growth. Frozen fruits and vegetables offer consumers year-round availability, an extended shelf life, and reduced food waste.

People can access a wide range of produce even when it is out of season, making it easier to maintain a balanced diet.

**Food Safety:** Food safety is a top priority in the frozen fruit and vegetable industry. Companies follow strict quality control and safety standards to ensure the products' safety and integrity.

Proper freezing techniques, packaging methods, and storage conditions are critical for maintaining the quality and safety of frozen products.

**Technological Advancements:** Innovations in freezing technologies have improved the quality and texture of frozen fruits and vegetables. The use of individually quick frozen (IQF) methods is a notable advancement in this regard. Packaging technologies have also evolved to preserve product freshness and extend shelf life.

**Sustainability:** Sustainability is becoming an increasingly important consideration in the industry. Some companies are exploring eco-friendly packaging and sourcing methods to reduce their environmental impact. Reducing energy consumption and waste in the freezing process is another area of focus for sustainability.

**Market Competition:** The industry is highly competitive, featuring both established multinational food companies and smaller, regional producers. Competition is fierce, with companies vying for market share.

**Distribution Channels:** Frozen fruits and vegetables are distributed through various channels, including supermarkets, hypermarkets, convenience stores, e-commerce platforms, and foodservice providers.

The convenience and versatility of these products make them suitable for both retail and foodservice sectors.

**Global Trade:** The industry often involves international trade, with countries exporting and importing frozen fruits and vegetables to meet supply and demand requirements. Different countries specialize in producing specific fruits and vegetables for export, contributing to the global trade dynamic.

**Consumer Trends:** Health-conscious consumers are increasingly seeking clean-label products with no added preservatives or chemicals. The demand for plant-based and organic options is rising, reflecting a broader shift toward healthier and more sustainable food choices.

**Challenges:** Challenges in the industry include supply chain disruptions, such as issues related to raw material sourcing, transportation, and labor shortages. Meeting changing consumer preferences and ensuring consistent quality can be complex and require ongoing innovation.

**Future Outlook:** The global frozen fruit and vegetable industry is poised for continued growth. The convenience factor and the alignment with health-conscious consumer preferences are expected to drive this growth. As the industry evolves, it will need to adapt to changing consumer expectations and maintain rigorous quality standards to succeed in the competitive market.

The frozen fruit and vegetable industry is a dynamic and essential component of the global food sector, offering consumers a convenient and nutritious way to maintain a healthy diet. Its ability to meet evolving consumer preferences and adapt to market changes will be essential for long-term success.

### *Background of Company*

Mr. Vilas Shinde, who has a gold medal post-graduate degree in agriculture, persevered in his ambition to work for the improvement of farmers and was successful in his endeavors because he refused to give in to setbacks and disappointments.

He established Sahyadri Farms in 2010 as a Farmer Producer Company (FPC), a cross between a cooperative organisation and a private limited company, with an investment of Rs 1 lakh and 100 farmers. Farmers own the entire company, and non-farmers are not permitted to participate.

With 10,000 farmers who together own over 25,000 acres in the Nashik region of Maharashtra and produce 1,000 tonnes of fruits and vegetables every day, Sahyadri Farms is a huge success story today. The largest grape exporter from India is Sahyadri Farms. In 2018–19, the business shipped 700 metric tonnes of pomegranates, 17,000 metric tonnes of bananas, and 23,000 metric tonnes of grapes.



Grape cultivars like Thomson, Crimson, Sonaka, Sharad seedless, Flame, and ARRA are grown by Sahyadri farmers. Of the fruits and vegetables produced at Sahyadri Farms, over 60% are exported and 40% are sold in India. 42 countries, including the US, Russia, and several European nations, are recipients of exports.

Sahyadri initially concentrated primarily on grapes due to the need for them in international markets.

Today, Sahyadri Farms not only grows fruits and vegetables but also produces a variety of value-added fruit and vegetable products under the Sahyadri Farms brand, including pulps, dices, fruit juices, slices, ketchups, frozen veggies, and fruit jams.

The company sells its own branded goods out of 12 locations across Nashik, Pune, and Mumbai. The goods are also offered for sale in additional retail locations. On the digital front, though, their products are exclusive to their website and cannot be found anywhere else.

Mr. Vilas has been developing a direct marketing strategy, which has seen significant growth since the 2020 Covid shutdown. The number of clients using their website and app to place orders has increased.

In 2018, the company built a fruit processing plant at Mohadi in Nashik in a campus spread across 100 acres with an investment of Rs 250 crore.

The campus also has KISAN-HUB which is an initiative to support the farmers with various inputs to assist in their farming activities.



Fig. 9 Sahyadri Farms

Mr. Vilas founded a sole proprietorship and worked with roughly twelve farmers in 2004. They farmed grapes, and in 2004 he used traders to ship roughly 72 metric tonnes of grapes to the European market. His hopes of making a substantial profit were dashed when he was paid Rs 70–80 lakh for a single container of grapes (about 18 metric tonnes) by the trader. Mr. Vilas made the decision at that point to quit using middlemen and provide the goods straight to clients.

The grapes' excessive chemical residue led to the rejection of their maiden shipment to Europe. Although the startup suffered a severe setback, Mr. Vilas was not ready to quit up. That marked a sea change in his life. After that, the business started to expand. Their revenue increased to Rs 525 crore in the most recent year from Rs 76.04 crore in 2017.

During the construction of Sahyadri Farms, it became acutely apparent that post-harvest losses represent a massive waste of scarce resources including water, labour, agri-inputs, and money in addition to implying food waste. Sahyadri Farms' state-of-the-art campus enables farmers to use cutting-edge machinery and processing facilities, adhere to international best practices, and provide the best fresh and processed goods to discriminating customers throughout the world.

#### Products

- Core Crops
- Fresh Fruits
- Processed Foods
- Dry Fruits
- BioActives



Fig. 10 Sahyadri Farms Products

## Major Strategic aspects:



Fig. 11 Sahyadri Farms Strategic Aspects

- **Access to Latest Technological Practices:**

Sahyadri Farms has embraced modern agricultural technologies and practices. By staying up-to-date with the latest advancements in agriculture, the company can improve crop yields, quality, and sustainability. This includes the use of modern irrigation techniques, crop management software, and precision agriculture methods.

- **Reduced Production Costs:**

Through efficient resource management and the use of modern farming practices, Sahyadri Farms has managed to reduce production costs. This not only benefits the company's bottom line but also ensures that farmers receive better returns for their produce.

- **Reasonable Rates:**

One of Sahyadri Farms' core missions is to ensure that farmers receive fair and reasonable rates for their agricultural products. By eliminating intermediaries and implementing a farmer-centric approach, the company can provide better rates to farmers while still offering competitive prices to consumers.

- **Chances of Exploring New Markets:**

Sahyadri Farms has actively explored and expanded into international markets. With a focus on exporting their products, the company has tapped into new market opportunities, such as the US, Russia, and various European nations. This expansion not only increases their revenue but also provides

opportunities for farmers to access a broader customer base.

- **Transparency of Deals:**

Transparency is a key element of Sahyadri Farms' operations. By operating as a Farmer Producer Company (FPC), where farmers own the company, transparency is inherent in the structure. This ensures that farmers can trust that they are receiving fair compensation for their contributions, and consumers can trust the quality and sourcing of the products.

### Major Functional Aspects:

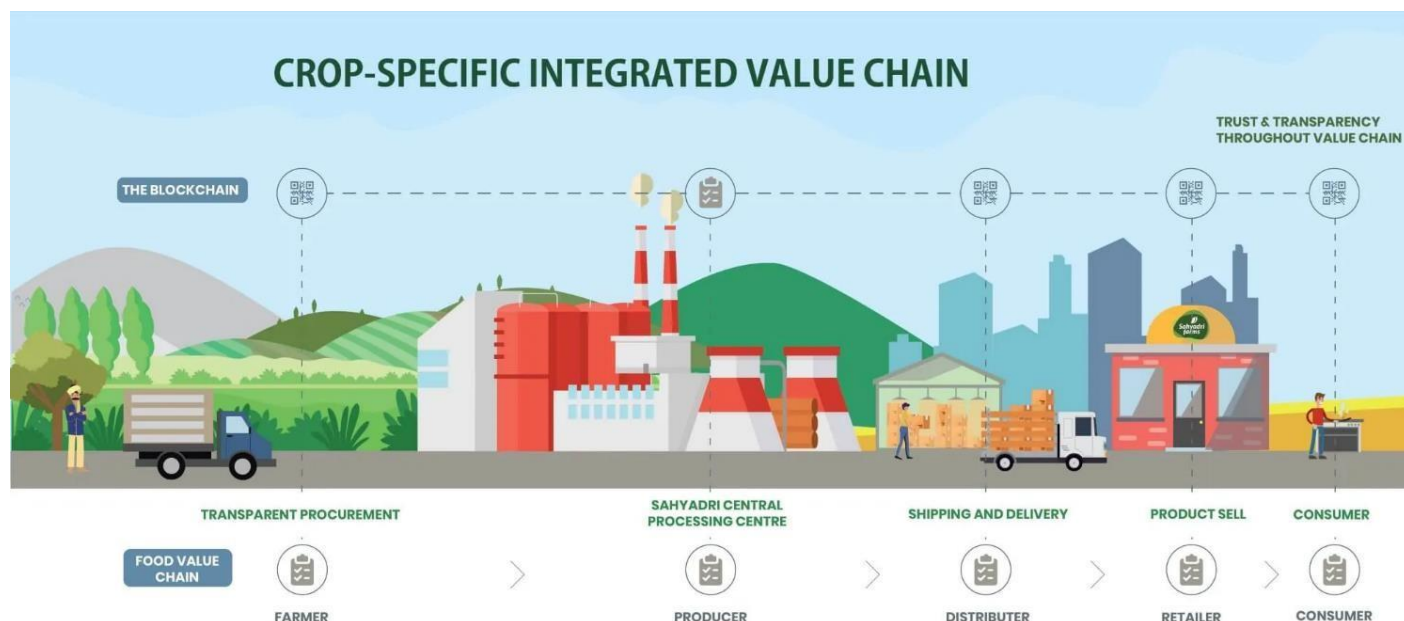


Fig. 12 Sahyadri Farms Functional Aspects

Sahyadri Farms has established a well-structured and efficient functional aspect of its operations, which involves building a crop-specific integrated value chain with different nodes in the food value chain. This approach is aimed at ensuring transparency, quality, and efficiency throughout the entire process

#### 1. Farmer Node:

- At the farmer node, Sahyadri Farms works closely with local farmers who are part of the cooperative. Farmers are vital stakeholders, and the company ensures transparent procurement processes.
- Sahyadri Farms supports farmers in improving their agricultural practices, access to resources, and market knowledge.

#### 2. Producer Node (Central Processing Center):

- The producer node, typically centered around a central processing facility, is responsible for receiving and processing the agricultural products.
- Sahyadri Farms' central processing center plays a crucial role in sorting, grading, and packaging the

produce to meet quality standards and customer demands.

### **3. Shipping and Delivery Node:**

- After processing, Sahyadri Farms takes responsibility for the shipping and delivery of the agricultural products.
- This ensures that products are transported efficiently and in a controlled manner, reducing the risk of damage or spoilage during transit.

### **4. Distributor Node:**

- The distributor node in the value chain is responsible for distributing products to various retail outlets and locations.
- Sahyadri Farms manages the distribution process to maintain the quality and freshness of the produce during transportation.

### **5. Retailer and Consumer Nodes:**

- Retailers play a key role in selling Sahyadri Farms' products to consumers.
- Consumers, at the final node, are the end users who benefit from the high-quality agricultural products.

**The integration of blockchain technology across the entire value chain is a significant step taken by Sahyadri Farms to ensure trust and transparency. Here's how blockchain benefits this integrated value chain:**

- **Transparency:** Blockchain technology allows for the creation of an immutable and transparent ledger of transactions at each node. This ensures that all stakeholders in the value chain can access and verify the information related to the products, from the farm to the consumer.
- **Trust:** The tamper-proof nature of blockchain technology builds trust among participants in the value chain. Farmers, producers, distributors, retailers, and consumers can have confidence in the accuracy and authenticity of the data recorded on the blockchain.
- **Traceability:** The use of blockchain enables the tracking and traceability of products. In case of any quality or safety concerns, Sahyadri Farms can quickly identify the source and address the issue, which is crucial for food safety and quality control.
- **Efficiency:** By automating and streamlining various processes and transactions through blockchain, Sahyadri Farms can reduce administrative burdens and improve operational efficiency.

## **Need / Justification for the Project:**

### **1. Understanding Consumer Behaviour:**

Need: Consumer preferences and behaviours constantly evolve. Understanding what customers want in terms of frozen products, their tastes, dietary preferences, and purchasing habits is crucial for product development and marketing strategies.

Justification: In-depth market research helps you tailor your products to meet specific consumer demands, ensuring your offerings align with market needs. This leads to higher customer satisfaction and increased sales.

## **2. Identifying Market Trends:**

Need: The frozen food market experiences ongoing trends and innovations. Identifying these trends, such as the rise in demand for healthy frozen options or sustainable packaging, is vital for staying competitive.

Justification: By being aware of market trends, your business can adapt and innovate its products to meet current demands, positioning your frozen products as relevant and appealing to consumers.

## **3. Assessing Market Demand and Potential:**

Need: Understanding the demand for frozen products in specific regions or demographic segments is essential. It helps in evaluating the market size, potential growth, and untapped opportunities.

Justification: Accurate market research quantifies the demand for frozen products, allowing you to make informed decisions about production volumes, pricing strategies, and expansion plans, maximizing your profitability.

## **4. Competitor Analysis:**

Need: Knowing who your competitors are, their strengths, weaknesses, and market share is vital. It helps identify gaps in the market and areas where your products can outperform competitors.

Justification: A thorough analysis of competitors allows you to position your frozen products uniquely, highlighting their advantages and addressing consumer pain points that competitors might overlook.

## **5. Regulatory Compliance and Industry Standards:**

Need: Food industry regulations, safety standards, and certifications are constantly evolving. Ensuring your products meet these standards is non-negotiable.

Justification: Market research helps you understand the legal requirements and industry standards. Adhering to these regulations ensures the quality and safety of your products, fostering trust among consumers and stakeholders.

## **6. Effective Marketing and Distribution Strategies:**

Need: Tailoring your marketing and distribution strategies to the specific needs of your target audience is essential for successful market penetration.

Justification: Market research provides insights into consumer demographics, purchasing channels, and effective communication strategies. This knowledge guides your marketing campaigns and distribution networks, maximizing your reach and sales potential.

## 7. Risk Mitigation and Business Sustainability:

**Need:** Identifying potential risks and challenges in the market, such as supply chain disruptions or changing consumer preferences, is crucial for long-term sustainability.

**Justification:** Market research helps you anticipate and prepare for market fluctuations and challenges. By being proactive, your business can adapt swiftly, ensuring its resilience and longevity in the market.

### *Research Methods, Findings & Solution*

- A SWOT analysis was conducted to get a holistic understanding of the industry.
- The study was conducted to understand the behavior of every frozen food supply chain stakeholder
- In the study the suppliers were not taken into consideration as they fall out of scope.

A SWOT analysis was also conducted to get a holistic understanding of the industry.

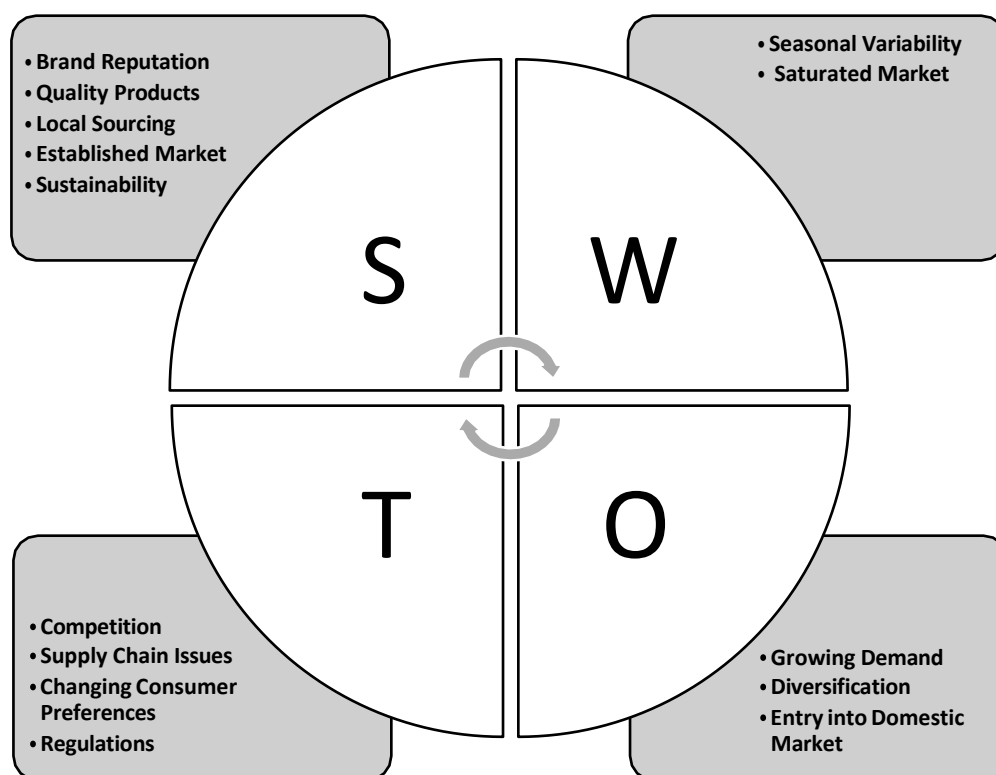


Fig. 13 Sahyadri Farms SWOT Analysis

### **Strengths:**

- **Quality Products:** Sahyadri Farms is known for producing high-quality, fresh, and organic fruits and vegetables. This can be a significant strength for entering the frozen foods market.
- **Local Sourcing:** The company's local sourcing and supply chain can be leveraged to ensure a steady supply of fresh produce for freezing.



- **Brand Reputation:** Sahyadri Farms already has a strong brand reputation; it can be a valuable asset for promoting frozen products.
- **Established Market:** As Sahyadri have established market for Food processing products in Maharashtra it will be comparatively easy to enter into frozen foods.
- **Sustainability:** The company has sustainable and eco-friendly farming practices; it can be a strength in a market where consumers are increasingly conscious of environmental issues.

#### **Weaknesses:**

- **Seasonal Variability:** Fresh produce availability can be seasonal, and if the company relies solely on its own farms, this can be a weakness in maintaining consistent product supply.
- **Saturated Market:** As we were conducting market research it was observed that many small and medium players are also there which can lead to competitions in frozen products.

#### **Opportunities:**

- **Growing Demand:** There is a growing consumer demand for convenient and healthy frozen food options, which Sahyadri Farms can tap into.
- **Diversification:** Entering the frozen foods market allows Sahyadri Farms to diversify its product range and revenue streams.
- **Entry into Domestic Market:** The Product Which Sahyadri Farms only exporting can enter into domestic market to increase their market capture and revenue

#### **Threats:**

- **Competition:** Established frozen food brands and local competitors can pose a threat to Sahyadri Farms' market entry and growth.
- **Supply Chain Issues:** Maintaining a consistent supply of fresh produce for freezing can be challenging, and disruptions in the supply chain can threaten product availability.
- **Changing Consumer Preferences:** Shifts in consumer preferences and health trends can impact the demand for frozen products.
- **Regulations:** Compliance with food safety and quality regulations is crucial in the frozen foods industry, and failure to do so can result in legal issues.

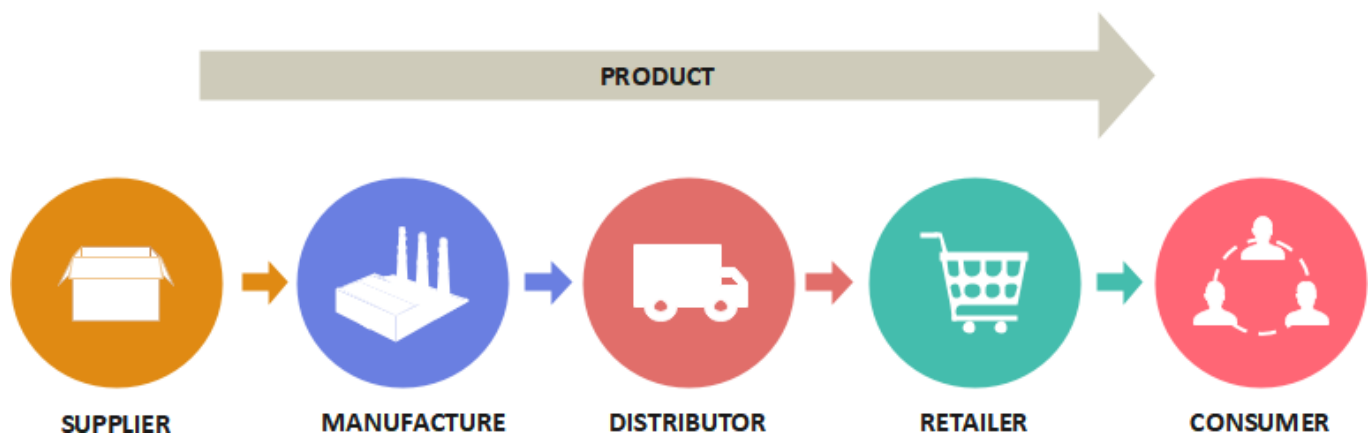


Fig. 14 Sahyadri Farms Product Flow

## *Methodology*

### **Manufacturer, Distributor, & Retailer**

We have carried out dealers and customers survey to understand the market scenario for frozen products.



Dealer surveys are instrumental in market research. They provide insights into market conditions, customer demand, and competition. These surveys help assess product performance, pricing strategies, and profit margins. Inventory management benefits from dealer feedback, guiding stock levels and turnover rates. For new product launches, dealer insights can identify market niches. They often have early information on emerging market trends. Competitive analysis is enhanced with data from dealer surveys. Customer feedback is collected to understand end-user preferences. Dealer surveys also help maintain strong distributor relationships by assessing dealer satisfaction. In essence, they are a vital component of comprehensive market research, offering critical data on distribution channels, product performance, and competitive landscapes.

The study was conducted to understand the behavior of every frozen food supply chain stakeholder  
In the study the suppliers were not taken into consideration as they fall out of scope.

### Dealer/Retailer Questionnaire

#### Section 1: General Information

1. Name of Retailer/Dealer: \_\_\_\_\_
2. Location (Area/City): \_\_\_\_\_

#### Section 2: Product Information

3. Which frozen food products do you currently stock or deal with? (Please list specific products or categories)

- \_\_\_\_\_  
- \_\_\_\_\_  
- \_\_\_\_\_

4. How long have you been selling or dealing with frozen food products?

- Less than 1 year
- 1-3 years
- 3-5 years
- More than 5 years

5. For how many and which companies you are connect with to sell their products?

6. Which Products are the most selling product and in which season demand for that product increase?

7. What are the problems face by you to store and sell those products?

#### Section 3: Margin and Pricing

8. On average, what is the margin level offered by the frozen food company on their products? (In percentage) or which company provide you high margin compared to others?

9. How do these margins compare to other food product categories you deal with?

- Better
- About the same
- Worse

10. Are there any specific challenges or issues related to margins and pricing that you face when dealing with frozen food products? Please explain.

---

#### Section 4: Feasibility and Storage

11. What are the key considerations for you in terms of feasibility when stocking frozen food products? (e.g., cold storage availability, transportation, demand).

Cost of storage of Frozen foods compared to others?

---

12. Do you face any logistical challenges in maintaining the quality of frozen food products during storage and transportation? If yes, please elaborate.

---

13. How you maintain inventory for frozen foods? Demand Analysis for those products

#### Section 5: Competitiveness

14. How do frozen food products compete with fresh alternatives in your market?

- Frozen food products are more competitive
- Fresh alternatives are more competitive
- Both have equal competitiveness

15. What strategies do you employ to promote and sell frozen food products to stay competitive?

---

#### Section 6: Supplier Relationship

16. How you manage your relationship with your supplier means do u have any contract system, how you do negotiation for margin with them, how much you charge them for if they want you to do marketing of their products?

17. How and when you decide to sell product on large discounts?

18. How satisfied are you with your current frozen food product supplier(s)? (On a scale of 1-5, with 1 being very dissatisfied and 5 being very satisfied)

19. What improvements or changes would you like to see from your frozen food product supplier(s) to

enhance your partnership?

## Section 7: Future Trends

20. Are there any emerging trends or products in the frozen food industry that you think will be significant in the near future?

## Section 8: Additional Comments

21. Is there any other information or feedback you would like to share regarding frozen food products in your market?

Contact Information (Optional): If you would like to be contacted for further discussions or have any questions, please provide your contact details below.

- Name: \_\_\_\_\_
- Email: \_\_\_\_\_
- Phone: \_\_\_\_\_

Sr. No.	Name of the Company	Ready to cook/Ready to eat	Products	Pack Size	Company Size	Selling Location (Not Address)	Distribution Model	Distribution Margin	Business Model	Retail Model	Online Presence	Offline Stores	Warehouse setup	Manufacturing Location	Consumer Preferred
1		R2C	Soya Chunks Vegan Chicken Slices Noodles Biryani Veg Keema Eggless Bhurji	500g 500g, 1000g 420g, 700g 200g 200g 200g	Mid Cap	India (dominant in Maharashtra, Rajasthan & UP)	Network Marketing Partnership	50%	B2B & B2C	Own Stores, Supermarkets, Online	Yes	Yes	Third Party (Network Marketing Company)	Udaipur, Rajasthan	Soya Chunks, Vegan Chicken Slices
2		R2C & R2E	samosa Custard apple pulp Frozen Peas Frozen corn Frozen Mango Pulp	Different Size	Small Cap	Maharashtra & MP	Centralised warehouse	25%	B2B	Supermarkets	No	No	third party rent	Kharadi, Maharastra	samosa, custard apple pulp
3		R2C & R2E	Frozen Peas Frozen Sweet Corn Frozen Mixed Vegetable Frozen cauliflower Frozen carrot Frozen French Beans	500g, 1kg 500g, 1kg 500g 500g 500g 500g	Large Cap	India (dominant in Delhi and banglore)	Direct to Retail & Hub and Spoke model	5%	B2B & B2C	Own Retail stores, super Market, Online	Yes	Yes	Own	Mangol Puri, Delhi	Peas, Mixed Vegetable
4		R2C & R2E	Frozen Veg Alphonso Mango Pulp Sprouts R2E, R2S and R2C other Products Kesar Mango Pulp Aam Ras Totapuri Mango Pulp Guava Pulp	Different Size	Large Cap	Vadlial Industries Ltd. Village-Pundhara, Tal-Mansa Dist. Gandhinagar D-24, Persakhara Ind. Area Bareilly	Direct to Company Outlets, Retail, Distributors & Hub and Spoke model	20 %	B2B & B2C	Own Retail stores, super Market, Online	Yes	Yes	Owned & 3 PL	Vadlial Industries Ltd. Village-Pundhara, Tal-Mansa Dist. Gandhinagar	honso Mango P

5	McCain	R2C	Aloo tikki French Fries Pattis Burger	1kg, 2kg 1kg, 2.5kg, 5kg 1kg, 2kg 1kg, 2kg	Large Cap	India	Direct to Company Outlets, Retail, Distributors & Hub and Spoke model	30%	B2C & B2B	Mostly in retail stores and supermarket	Yes	Yes	Owned & 3 PL	McCain Foods India Pvt. Ltd S.H-41, Milestone #54 P.O. Ballyasan, District : Mehsana Gujarat – 382732	NA
6	DOP Foods	R2C & R2E	Aloo tikki French Fries Pattis Burger Pickle	1kg, 2kg 1kg, 2.5 kg, 5 kg 1kg, 2kg 1kg, 2kg	Small Cap	Kerala, Maharashtra	3PL	30%	B2B & B2C	Mostly in retail stores and supermarket	No	No	3PL	Emakulam, Kerala	Pickles
7	TC FROZEN VEGETABLES	R2C & R2E	Sweet corn Green Peas Mixed Vegetables	500g, 1kg 500g, 1kg 500g, 1kg	Large Cap	Pan India	Direct to Company Outlets, Retail, Distributors & Hub and Spoke model	NA	B2B & B2C	Mostly in retail stores, Supermarkets, Marts and Online	Yes	No	Owned and 3P	ITC Ltd - ABD run Agro Processing Foods No 181, Capital Hill Umrale (BK) Dindori Taluk Nashik District - 422003 Maharashtra	NA
8	Al Falah Fruit Pulp Product	R2E & R2C	Fruit Pulp Frozen Fruit Slices Frozen IQF Fresh Fruits	1kg, 5kg, 10kg, 15kg, 20kg, 25kg 1kg, 5kg, 10kg, 15kg, 20kg, 25kg 1kg, 5kg, 10kg, 15kg, 20kg, 25kg 1kg, 5kg, 10kg, 15kg, 20kg, 25kg	Mid Cap	Maharashtra	Wholesaler, HoReCa	NA	B2B	Mostly B2B	Yes	No	Owned	Thane, Maharastra	Frozen Tomato Frozen Carrot Frozen Potato IQF
9	Basant Agro Food Tech	R2E & R2E	Fruit Pulp Frozen Fruit Slices Frozen Mix Vegetables Frozen Fruit Dices	1kg 1kg 1kg 1kg	Mid Cap	State, dominant in Mahara	3PL	NA	B2C	Directly to retail stores	No	No	Owned	Akola, Maharastra	Frozen Mixed Veg
10	AgroDelight	R2C & R2E	Frozen Berries Frozen Vegetables Jams Sauces	500g, 1kg 500g, 1kg 500g, 1kg 500g, 1kg	Mid Cap	Maharashtra	Manufacturer and distributors	NA	B2C	Directly to retail stores and supermarket	Yes	No	Owned	412210 Shirur Khed Road, Gat No - 238, Nirvi, Tal-Shirur, Dist-Pune-412210 Maharashtra, India, Shirur, Maharashtra 412210, IN	Frozen Mix Veg
11	reamland Agrofresh Products	R2C & R2E	Frozen berries (6) Frozen Fruit Slices (5) Frozen Strawberry (2) Alphonso Mango Pulp (1) Frozen Custard Apple (1) Frozen Chikoo Slices (1)	1kg 1kg 1kg 1kg 1kg 1kg	Small Cap	Maharashtra	Direct to Company Outlets, Retail, Distributors, online	NA	B2B & B2C	Mostly in retail stores, Supermarkets, Marts and Online	Yes	No	Owned	Chavan Vasti, Survey No. 267/1/2, Near Handewadi Chowk Unni Devachi, Kape Building Road, Haveli Pune - 412308, Maharashtra, India	Frozen fruits
12	Mandar	R2C, R2E	Frozen Strawberry Frozen Shredded Coconut Frozen Mixed vegetable Frozen Green Peas Frozen Anjeer pulp Frozen french Beans Frozen French Corn Frozen Cauliflower Frozen tomatoes Frozen Carrot	1kg 1kg 1kg 1kg 1kg 1kg 1kg 1kg 1kg 1kg (min order -30kg)	Small Cap	No. 17/1/5, Parge Nagar, Kondhwa Budruk, Pune- 411045, Maharashtra, India	Wholesaler and Trade	NA	B2B	Detail to Retail Stores	Yes	No	Owned (3000sq	No. 17/1/5, Parge Nagar, Kondhwa Budruk, Pune- 411045, Maharashtra, India	NA
13	Naturefest Foodpro India Private Limited	R2C	Frozen Mix vegetables Frozen Green Peas Frozen Cauliflower Frozen okra	1kg 1kg 1kg 1kg	Small Cap	Pune Maharashtra	Wholesaler	NA	B2C, B2B	Retail stores, supermarkets	No	No	3PL	Office No 4, Datta Niwas, C.T.S. No 1019/2, Model Colony, Near Deep Bunglow Chowk, Shivaji Nagar, Pune-411016, Maharashtra, India	NA
14	SS Agro	R2C	Frozen Sweet Corn Cobs Frozen Corn Kernels Frozen Peas Frozen Mix Veg Mango Pulp	NA	Small Cap	Maharashtra	Manufacturer and distributors	NA	B2C	Direct to Retail Stores	No	No	Owned	Bhawrapur, Unuli Kanchan, Pune, Maharashtra - 412202, India	Frozen Peas
15	BIRLA AGRO	R2C	Frozen Beans Frozen Beans Frozen Sweet Corn Frozen Mixed Vegetables	200gm 200gm 1kg 500gm	Small Cap	Maharashtra	Manufacturer and distributors	NA	B2B	Direct to retailers or their business	Yes	No	Owned Cold Stor	Malthan Phata Rautwadi Chowk Shikrapur Tal Shirur, Dist, Pune, Maharashtra 412206	Mixed vegetables and Green Peas
16	Jai Jinendra Cold Storage Private Limited	R2C, R2E	Sweet corn Green peas Potato French beans Cauliflower Mix vegetables Strawberry Custard apple, sitafal, mango and Strawberry Pulp Jackfruit petals	NA	Small Cap	Maharashtra	Manufacturer and distributors	NA	B2B	Direct to retailers	Yes	No	Owned	Jai Jinendra Cold Storage Pvt Ltd Gat No 1994/95, Pune - Saswad Road, A/P - Vadki, Tal - Haveli, Jai Jinendra Cold Storage Pvt Ltd Dist - Pune, Pin - 412308 Plot no - D5 & D6, Supa - Parner Industrial Area, Supa- Parner Road, A/P - Hanga, Tal - Parner	NA
17	Ensigns Food Products	R2C and R2E	Frozen Alphonso Pulp Sweet Mango Pulp Frozen natural White Guava Pulp Custard Apple Pulp Frozen Sweet Corn Mango Slices Frozen Green Peas Cauliflower, French beans, Jamun Slice Frozen Mix Veg Pomegranate Anis	NA	Small Cap	Maharashtra	Manufacturer	NA	B2B	Direct to retailers	Yes	No	3PL	Hadapsar, Pune	NA


18	Iceage Cold Storage	R2C and R2E	Frozen Sweet Corn	1kg, 10kg, 30kg	Mid Cap	Maharashtra	Manufacturer and Distributor	NA	B2B & B2C	Direct to Retail Stores	No	No	own Warehouse	Pune	Frozen Mango Pulp Frozen Mix Veg Frozen Peas
	Frozen Fruit Pulp (Mango, Jamun, Strawberry)		1 kg												
	Frozen Green Peas		1 kg												
	Frozen Spinach Pulp		5Kg												
19	Biswabhoomi Agrofoods Private Limited	R2C & R2E	Frozen Mushroom	200g, 500g, 1kg	Mid Cap	Mumbai	Manufacturer and Distributor	NA	B2B & B2C	Direct to Retailers	No	No	own Warehouse	MANCHESWAR, BHUBANESWAR, Khordha, Odisha, 751007	Mix Veg
	Frozen Corn		200g, 500g, 1kg												
	Frozen Peas		200g, 500g, 1kg												
	Frozen IQF		200g, 500g, 1kg												
	Frozen Mix veg		200g, 500g, 1kg												
	Frozen Chicken		200g, 500g, 1kg												
	Frozen Fish		200g, 500g, 1kg												
SV International Foods	R2C and R2E	Frozen Custard Fruit Pulp	1Kg	Mid Cap	Pune	Manufacturer and Whole	NA	B2B	Direct to Retailers	Yes	No	NA	Pune, Maharashtra	NA	
	Frozen Sweet Corn	1 kg, 30 Kg													
	Frozen Green Peas	250g, 1Kg													
	Frozen Mixed vegetable	1Kg													
	Whole Frozen Strawberry	1000kg Min Order													
	Frozen Alphonso Mango	1000kg Min Order													
	Frozen Alphonso Slice	1000kg Min Order													
	Frozen Alphonso Mango Pulp	1kg													

Fig. 15 Table data point

## Findings

- ❖ There were results from Table from each data points and some of the relationship was established.

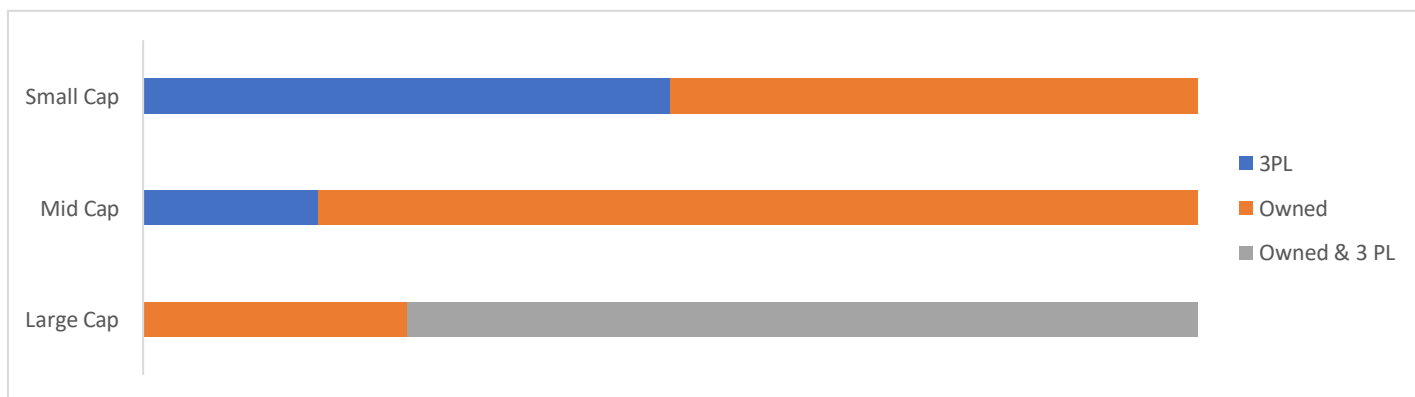


Fig. 16 Relation Between Company Size & Warehouse Setup

- ❖ The graph above states the relation between company size and its warehouse setup and there can be seen a increase of owned warehouses in the mid cap and small cap companies in comparison to large cap which is unlike other industry where small cap and mid cap generally rely on 3PL here there is a negative relation.
- ❖ This highlights that only those players who have cold storages or cold infrastructure are coming into the market which highlights the **“Lack of Infrastructure”** in the industry.

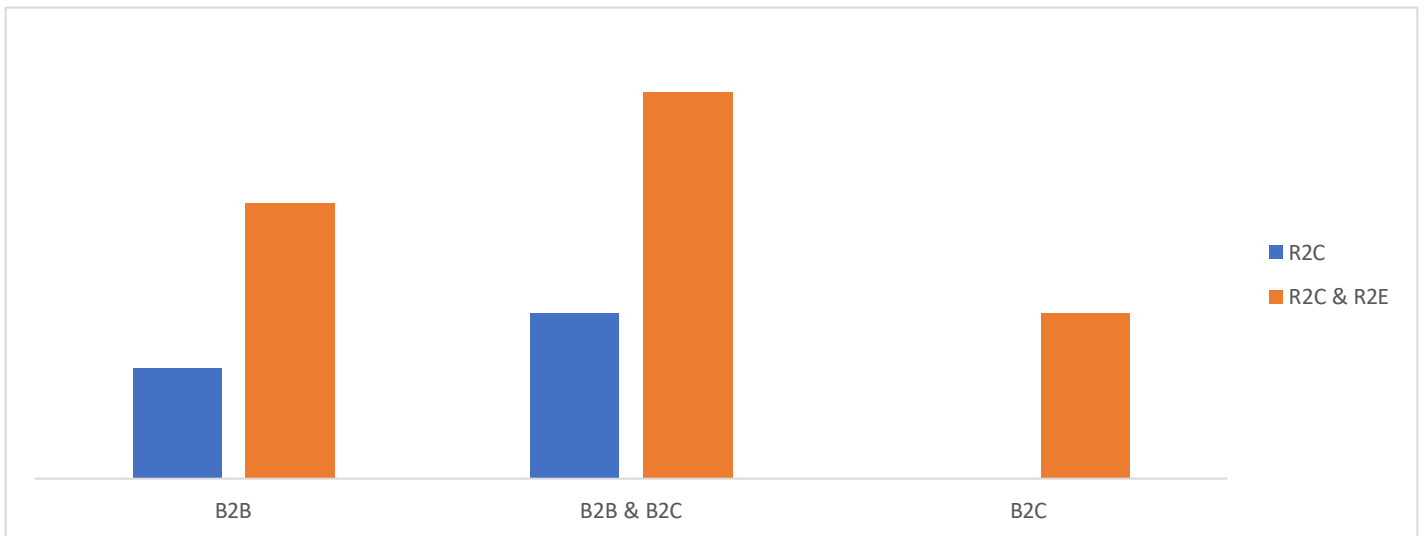


Fig. 17 Relation between Business Model & R2C/R2E

- ❖ The graph clearly shows that whether the business is B2B or B2C the **market for only R2E is very limited**.
- ❖ Also, it is observed that the to cater the frozen market it is always better to go for both R2C & R2E regardless of business model.

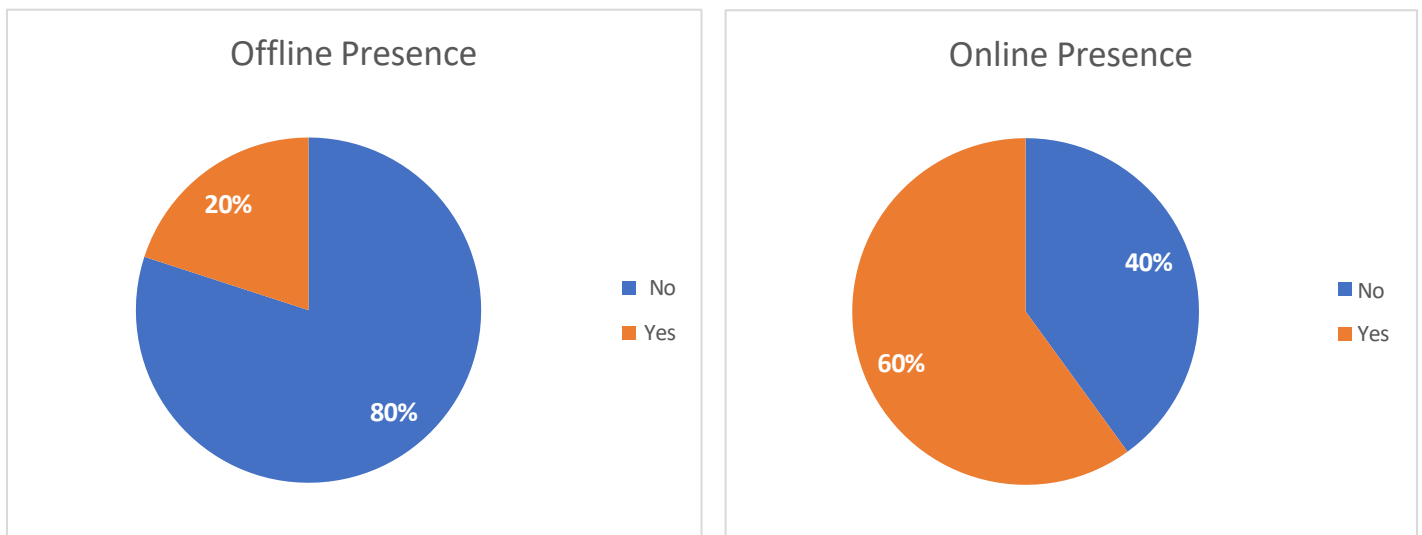


Fig. 18 Presence of offline and online

- ❖ From the first graph it is clearly visible that frozen food companies generally do not have their own stores rather they send their products to retail stores and supermarkets.
- ❖ From the second graph we can see that they are mostly present online to increase their visibility and accessibility.

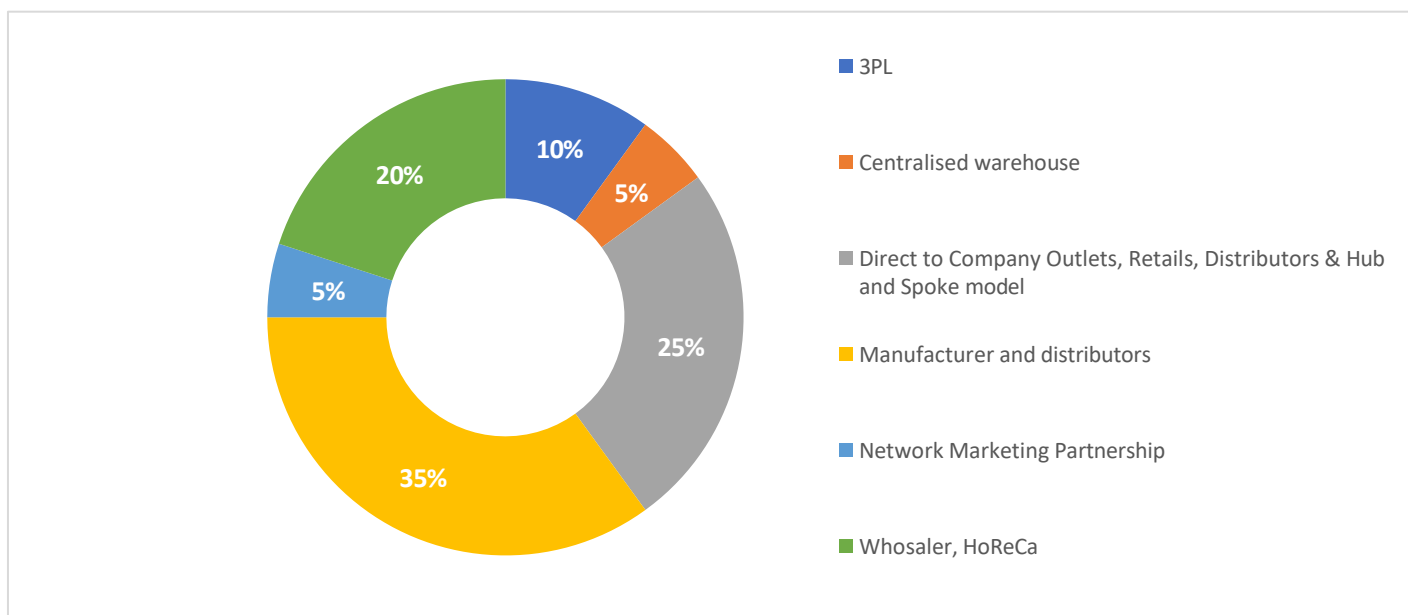


Fig. 19 Distribution Models

- ❖ There were some conventional as well as some new models that came up.
- ❖ Note that the new models list involves suggestion from the author also.

Conventional Models	
Third Party Logistics (Distribution margin – 28 to 32%)	Third-Party Logistics (3PL) is the outsourcing of logistics and supply chain functions to specialized companies, offering cost reduction, efficiency improvement, and focus on core operations. Customizable services use advanced technology for shipment optimization. Ideal for international expansion and complex supply chains, but challenges include control and data security.
Centralized Warehouse (Distribution margin – 30%)	A centralized warehouse is a single storage facility strategically located to consolidate and store inventory for efficient distribution. It provides cost savings through economies of scale and streamlined inventory management, but may result in longer transportation times to reach various destinations in the supply chain.
Direct to Outlets	Direct to Company Outlets are company-operated retail stores offering cost savings and brand control. Retails are brick-and-mortar stores, independent or part of a chain, offering various products. Distributors act as intermediaries, buying from manufacturers and selling to retailers.
Hub & Spoke model (Distribution margin – 10 to 15%)	The Hub and Spoke model are a logistics strategy where a central hub facility connects to smaller spoke facilities for distribution, enhancing efficiency and reducing transportation costs. Each of these models serves different roles within the supply chain, catering to various business strategies and consumer preferences.
Manufacturer & Distributor	Here this model refers to self-manufacture and self-distribution.
Wholesalers	Wholesalers are intermediaries in the supply chain who purchase products in bulk from manufacturers and sell them in smaller quantities to retailers, businesses, and institutions. They serve as a link between producers and end-users, helping to distribute goods efficiently
HORECA	HORECA is an acronym for the hospitality industry, referring to hotels, restaurants, and catering businesses. In this context, HORECA describes a specific

	sector within the service industry that relies on the procurement of various products, including food, beverages, and supplies, to operate their establishments. Wholesalers often play a crucial role in supplying HORECA businesses with the necessary products and ingredients they need to serve their customers.
--	---

Table 1: Conventional Distribution Models

New Models	
Network Marketing Partnership (Distribution margin – 50%)	A network marketing partnership involves individuals partnering with a parent company to sell its products or services. Distributors earn commissions not only from their direct sales but also from the sales of their recruits and their recruits' recruits, creating a hierarchical network. This business model offers entrepreneurial opportunities but can also be controversial and subject to regulatory scrutiny, so careful consideration is important before entering such a partnership.
Retailer cum Super-stockiest	It is where the factory outlet or company brick stores also act as stockiest which helps in effective reverse logistics management reducing time & cost.

Table 2: New Distribution Models

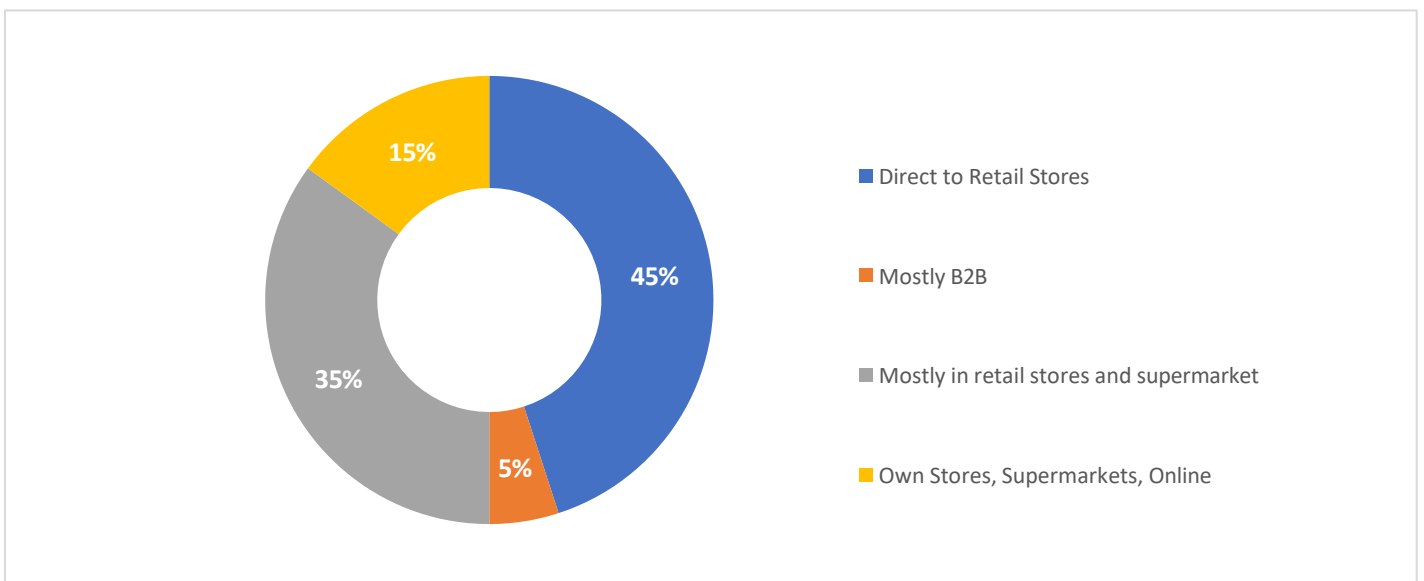


Fig. 20 Retail Model

- ❖ It is observed that for retail purpose companies usually go for sending goods to supermarket and retail stores.
- ❖ Many companies also go for online along with that and right now few have only opted for omnichannel.



## Customer Survey

### Customer Survey for Frozen Products (only for frozen fruits, vegetables, its pulp and related products)

We would love to hear your thoughts or feedback on how we can improve your experience! This survey is only for **frozen fruits, vegetables, its pulp and related products** only not for processed products.

\* Indicates required question

1. Full Name \*

\_\_\_\_\_

2. Age (Years) \*

\_\_\_\_\_

3. Location (Area/City) \*

\_\_\_\_\_

4. Which customer segment you are belong to? \*

Mark only one oval.

- ☐ Working professional  
☐ Student  
☐ Sport Person  
☐ Homemaker  
☐ Other: \_\_\_\_\_

5. How often you purchase frozen products? \*

Mark only one oval.

- ☐ Not very often  
☐ Often  
☐ Very often  
☐ Always

6. Which Frozen product do you purchase more? \*

Check all that apply.

- ☐ Frozen Corn  
☐ Frozen Fruit Pulp  
☐ Frozen Vegetables  
☐ Frozen Green Peas  
☐ Other: \_\_\_\_\_

7. Which Brand you preferred the most to purchase frozen products? \*

\_\_\_\_\_

8. How much money you are ready to spend on these product? (per week) \*

\_\_\_\_\_

9. Which pack size you preferred the maximum time to purchase? \*

Check all that apply.

- ☐ 250gm  
☐ 500gm  
☐ 1kg  
☐ 2kg  
☐ 5kg  
☐ Other: \_\_\_\_\_

10. How much you are satisfied with the frozen product you purchase? \*

Mark only one oval.

1 2 3 4 5  
 Not ☐ ☐ ☐ ☐ ☐ Highly satisfied

11. Do you think that these products as useful as fresh products? \*

Mark only one oval.

- ☐ Not useful  
☐ Slightly useful  
☐ Highly useful

12. If any product you think should be available in frozen form, kindly mention below.....

\_\_\_\_\_

13. What your opinion/expectations about the frozen products you are using?

\_\_\_\_\_

## Findings

### Age (Years)

47 responses

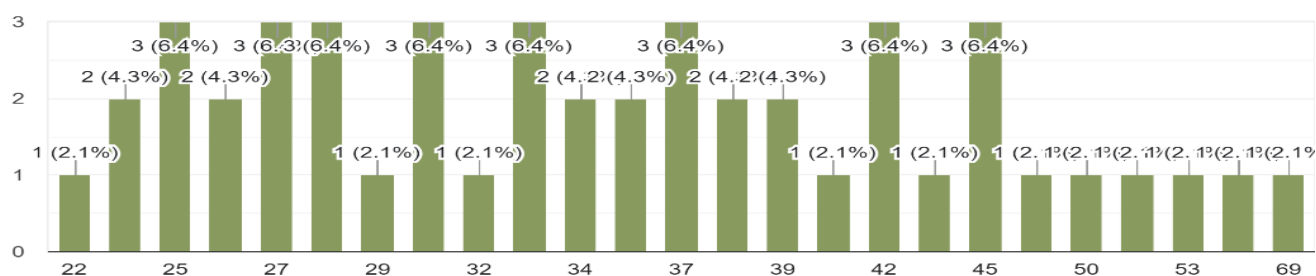


Fig. 21 Age of respondents

### Which customer segment you are belong to?

47 responses

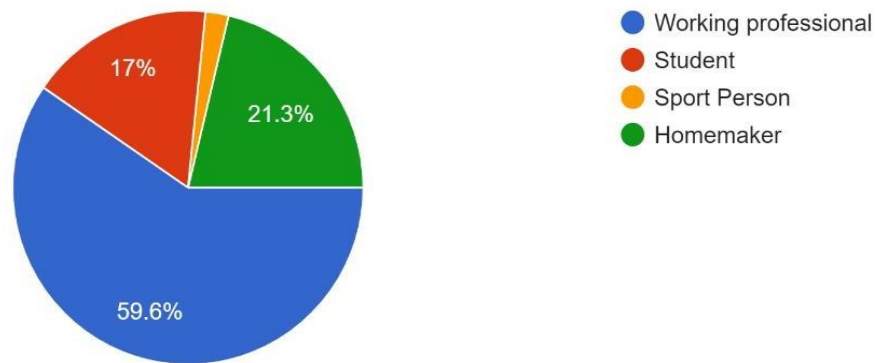


Fig. 22 Customer Segments

### Which Frozen product do you purchase more?

47 responses

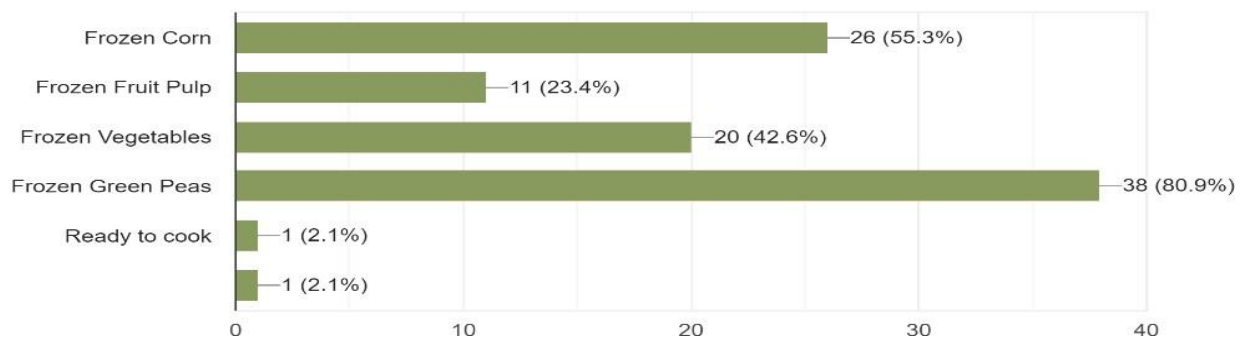


Fig. 23 Preferred Products

### Which pack size you preferred the maximum time to purchase?

47 responses

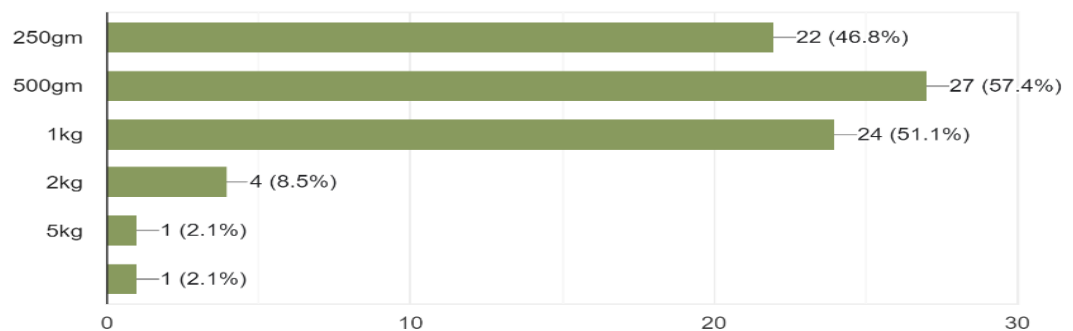


Fig. 24 Pack Size Preference

## Figure

How often you purchase frozen products?

47 responses

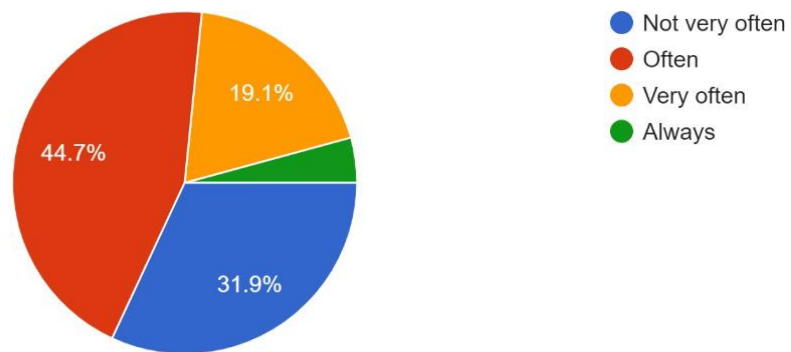


Fig. 25 Frequency of Purchase

Do you think that these products as useful as fresh products?

47 responses

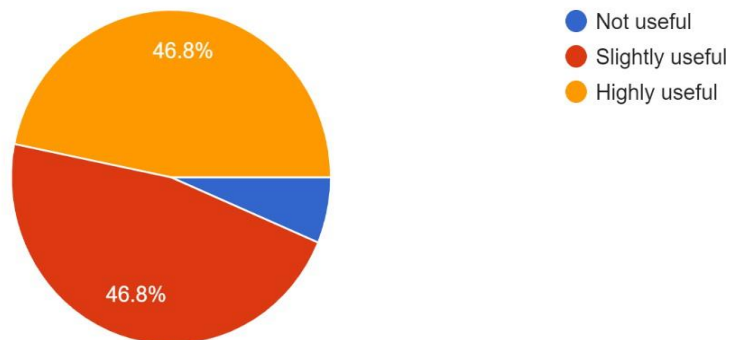


Fig. 26 Usefulness of Products

How much you are satisfied with the frozen product you purchase?

47 responses

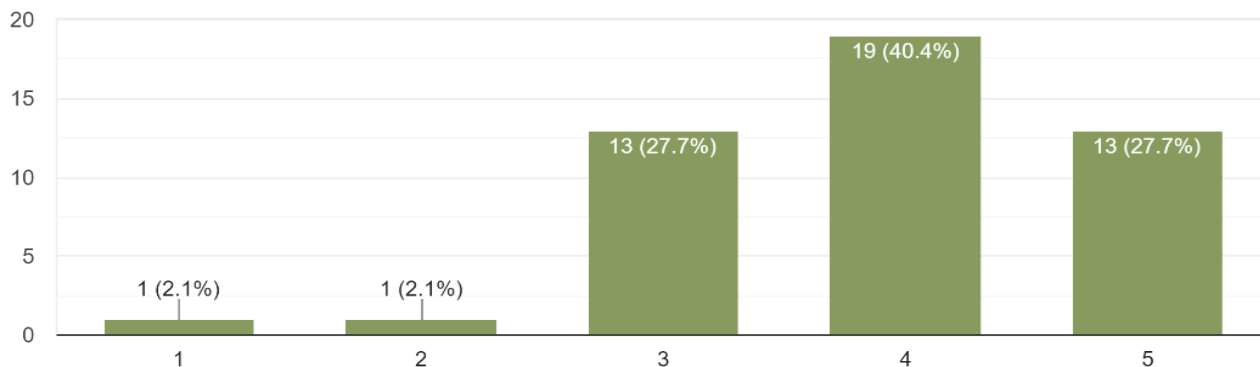


Fig. 27 Satisfaction of Customers

**If any product you think should be available in frozen form, kindly mention below.....**

Dragon Fruit Pulp  
 Frozen ivy gourd  
 Frozen coriander  
 Frozen Ginger paste  
 Leafy vegetables  
 Frozen Clove  
 Frozen capsicum  
 Peeled frozen ginger pieces  
 Fruits  
 Leafy Vegetable  
 Leafy vegetables  
 Fresh fruit pulp  
 Ready to eat frozen meals, and some seasonal fruits and vegetables

**What your opinion/expectations about the frozen products you are using?**

It should work like fresh ones  
 very useful  
 Anytime available and long shelf life  
 Using frozen vegetables saves time  
 Time saving and available in off season  
 Availability is good but cannot beat the taste of fresh ones  
 They are very useful for on time finishing the work as I am working professional  
 They really save time  
 We are waiting for more frozen products to be available  
 The prize should be less  
 Good product  
 Products freshness  
 Should be highly perishable.

The future of frozen food is expected to be shaped by advancements in technology, sustainable practices, and changing consumer preferences. Innovations in freezing techniques will likely improve the quality and nutritional value of frozen foods. As people continue to lead busy lives, convenient and nutritious frozen meal options are likely to become more popular. As people continue to lead busy lives, convenient and nutritious frozen meal options are likely to become more popular. The product should be in its original taste when it used.

❖ The customer survey shows that

- The age of the buyer lies between 20-60 years.
- Most of the buyers belong to working professionals' segment which shows that the major benefit the frozen food is providing is **minimizing the time, so the customers with less time could be targeted.**
- The market of frozen peas and corn is still dominating the market but **growing demand for frozen mix vegetables and fruit pulps can open new opportunities.**
- Small sizes of 250g and 500g is still prevalent in the market when going for direct consumers.
- Around 60% customers fall in the category of often and very often combined which shows the growing potential of the market specially in Tier 1 and Tier 2 cities as the research was carried out mostly in these two.
- A high majority finds the product to be useful.
- A good proportion of population is satisfied with the product.
- There were also some open-ended questions which gave new insights to the research.
- 

## *Solution*

### **1. Good Infrastructure:**

Investing in excellent cold storage and logistics facilities is paramount. This infrastructure ensures the integrity of your frozen products from production to delivery. Monitoring and maintaining proper temperatures and humidity levels are essential to prevent spoilage and maintain product quality. Regular equipment checks and backup systems can prevent potential breakdowns, ensuring the reliability of your operations.

### **2. Diverse Business Models (B2C, B2B, R2C, R2E):**

Catering to both B2C (Business-to-Consumer) and B2B (Business-to-Business) markets provides a diverse revenue stream. R2C (Ready to Cook) products cater to consumers who prefer cooking, offering them pre-prepared ingredients. R2E (Ready to Eat) products are ideal for those seeking convenience. Balancing these markets prevents overreliance on one segment, enhancing scalability. B2B relationships can involve collaborations with restaurants, hotels, and catering businesses, expanding your market reach.

### **3. Online Presence:**

Establishing a strong online presence through a user-friendly website and mobile apps enhances accessibility. Provide detailed product information, including ingredients, nutritional value, and cooking instructions. Implement secure online payment gateways and offer a seamless ordering experience. Additionally, consider integrating features like order tracking and personalized recommendations to enhance customer satisfaction.

#### **4. Targeted Customer Focus (B2C - Working Professionals):**

Targeting working professionals is strategic. These individuals often have busy schedules and limited time for meal preparation. Emphasize the convenience and time-saving aspects of your products. Focus on quality ingredients, efficient packaging, and easy-to-follow cooking instructions. Highlight the benefits of your frozen products, such as freshness, nutritional value, and quick preparation, instead of comparing them to fresh produce.

#### **5. Differentiation Strategies:**

**a. Product Innovation:** Regularly conduct consumer surveys to understand preferences and trends. Innovate your product line by introducing unique flavours, meal combinations, or dietary options. Stay updated with emerging food trends to create products that resonate with your target audience.

**b. Hyperlocal Approach:** Partner with local farmers and suppliers to source fresh, high-quality ingredients. Emphasize the locality of your products, appealing to environmentally conscious consumers. Highlighting community engagement and supporting local businesses can create a positive brand image.

#### **Additional Considerations:**

**a. Quality Assurance:** Implement rigorous quality control protocols at every stage of production. Conduct regular inspections, quality tests, and audits to ensure consistency and safety. Quality assurance builds trust among consumers and partners.

**b. Customer Engagement:** Foster strong relationships with customers through social media, email newsletters, and loyalty programs. Engage with customers, addressing their feedback promptly. Personalize interactions to enhance customer loyalty and encourage repeat business.

**c. Sustainability:** Adopt eco-friendly packaging options and sustainable practices. Communicate your commitment to environmental responsibility to appeal to environmentally conscious consumers.

#### **Limitations to Solution**

- ❖ **Space Constraints:** There are space constraints in retail stores so company needs to have retailers trust otherwise higher margins are also rejected by retailers due to space constraints.
- ❖ **Comparison with Fresh Produce:** There are always comparison of frozen with fresh produce so frozen market player needs to come-up with different strategy other than quality.
- ❖ **Poor Infrastructure:** Only owned infrastructure is recommended as third party in infra

requires more cost with undesirable quality.

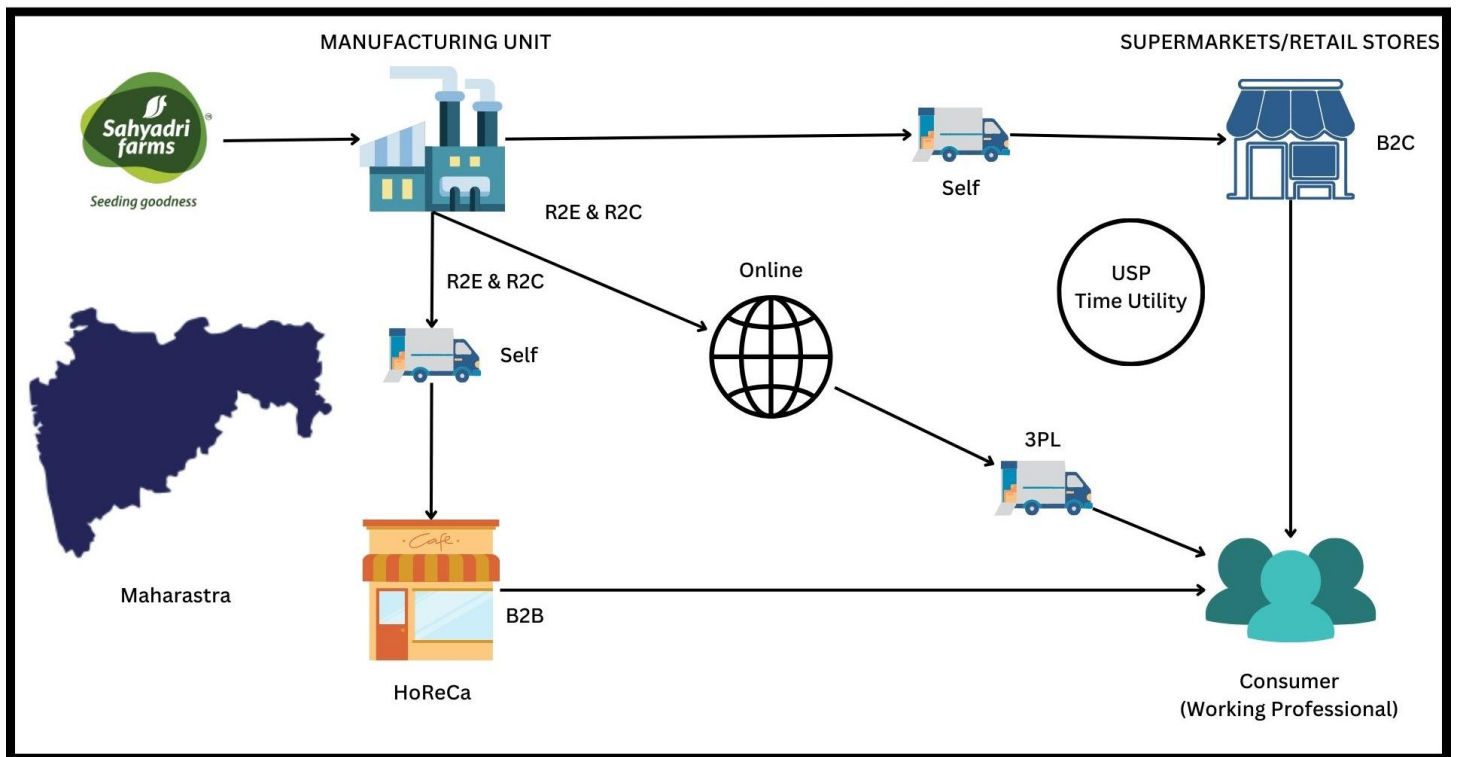


Figure 28 Business Model suggested

## *Managerial Implication & Further Scope of Study*

### **Managerial Implications**

**Product Development:** The findings of the market research can guide the development of frozen products that cater to the specific tastes and preferences of the domestic market. The insights can help in creating products that resonate with local consumers.

**Market Segmentation:** The project can help in identifying different customer segments within the domestic market. This information is valuable for tailoring marketing strategies and product offerings to specific target groups.

**Competitive Strategy:** By conducting competitor analysis, Sahyadri Farms can gain insights into the strengths and weaknesses of existing players in the domestic frozen market. This information is vital for developing a competitive strategy and positioning their products effectively.

**Pricing Strategy:** The project can provide insights into pricing dynamics within the domestic frozen market. Understanding the price points at which competitors are operating and what consumers are willing to pay is crucial for setting competitive and profitable pricing strategies.

**Distribution Channels:** Understanding the market also involves understanding the distribution channels that are most effective. Sahyadri Farms can identify the best ways to get their products to consumers, whether it's through traditional retail, online sales, or other channels.

**Market Acceptance:** The research will reveal the extent to which domestic consumers are willing to accept and adopt frozen products. This can influence the scale of production and the pace of market entry.

**Regulatory and Compliance:** Research should also include an analysis of relevant regulations and compliance requirements for frozen food products in the domestic market. This is critical for ensuring that Sahyadri Farms meets all legal and safety standards.

**Marketing and Branding:** The project findings can be used to create marketing campaigns that emphasize the unique selling points of Sahyadri Farms' frozen products. Branding strategies can be developed to resonate with the domestic audience.

**Supply Chain Management:** Understanding the domestic market can help optimize the supply chain for sourcing, storing, and distributing frozen products. This includes determining the locations for storage and distribution centers.

**Risk Assessment:** By conducting a comprehensive analysis, Sahyadri Farms can identify potential risks and challenges associated with entering the domestic market for frozen products. This enables the development of risk mitigation strategies.

**Market Expansion:** Depending on the findings, the project can also provide insights into which regions or cities within the domestic market are most promising for initial expansion. This can help in planning the rollout of products.

**Consumer Feedback Mechanisms:** Establishing feedback mechanisms from domestic consumers is vital for continuous improvement. Sahyadri Farms should incorporate customer feedback into their product development and marketing efforts.



The managerial implications of this project are far-reaching and can significantly impact Sahyadri Farms' successful entry into the domestic frozen market. Properly executed market research and competitor analysis will provide a solid foundation for strategic decision-making and market penetration.

### **Further Scope of Study**

**Diversify Product Range:** To meet the diverse needs of their valued customers, Sahyadri Farms could consider broadening their product range. This could involve exploring new and popular frozen food items, such as ready-to-eat meals like biryani, pasta, or traditional regional dishes. These additions cater to the convenience-seeking consumer segment, particularly working professionals.

**Product Innovation:** To maintain their market leadership, Sahyadri Farms should prioritize continuous innovation. Monitoring emerging food trends and consumer preferences can help them introduce new and unique frozen food products. Collaborating with culinary experts or chefs can enable them to develop innovative recipes that stand out in the market.

**Packaging and Portion Sizes:** In order to cater to different consumer needs, they could explore packaging options. While smaller sizes are popular for direct consumers, they might consider introducing family-sized or bulk packaging for specific products, targeting larger households. Additionally, their commitment to eco-friendly packaging will resonate with environmentally conscious consumers.

**Local Sourcing:** Sahyadri Farms can emphasize their hyperlocal approach by highlighting their partnerships with local farmers and suppliers. This not only supports the local economy but also resonates with consumers who prefer locally sourced and sustainable products.

**Partnerships and Collaborations:** Exploring collaborations with restaurants, hotels, and catering businesses is a promising avenue for Sahyadri Farms. Supplying frozen ingredients to these establishments can be a lucrative business-to-business (B2B) venture. Collaborating with these businesses to create custom frozen products that align with their menu offerings will be mutually beneficial.

**Geographical Expansion:** If Sahyadri Farms has primarily focused on the Maharashtra market, it's worth considering the expansion of their distribution to other regions and states in India. Identifying high-potential markets, building strong distributor relationships, and adapting their products to regional tastes and preferences are key steps.

## *Moment of Students*



Fig. 28 Students at Sahyadri Farms

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