



UNIVERSITY OF WALES

**Trinity Saint David
London**

MBA in International Business

Research Title:

**The influence of economic conditions on international marketing decision
in the agricultural sector in India.**

Student Name: Mihirsinh Bharatsinh Rathod

Student ID:2424573

Dissertation Supervisor: Nishi Ramsurrun

Total Word count: 20461

Module: Dissertation

Module code: LCMB7035

Declaration

I hereby declare that the project entitled, “**The influence of economic conditions on international marketing decision in the agricultural sector in India**”, submitted to University of Wales, is an original work completed by me. This work has been submitted for fulfilment of the requirements for the award of the degree of Master of Business Administration. The results included in this project have not been submitted to any other university or institutions for achieving any degree or diploma.

Acknowledgement

I am deeply grateful to the people who have helped and supported me throughout the project. In this regard, I will firstly name my professor, who has provided me with the golden opportunity to complete this project on such important topic. I am also thankful to him for his valuable guidance and directing me to the right way. I would also like to acknowledge my parents and friend for the constant support and assistance for generating ideas and perspective regarding the thesis.

Abstract

The aim of this research is to analyse the economic scenarios in the Indian agricultural market, based on which the international marketing decision in the industry has been influenced. Research onion has been included as the framework for developing methodology. Interpretivism philosophy, inductive approach, qualitative descriptive-analytical design, secondary qualitative research strategy, mono method has been chosen. Secondary data has been collected here for answering the research questions. Qualitative thematic data analysis technique has been adopted here. From the findings, it has been known that macroeconomic conditions have influenced price fluctuations in the Indian agricultural sector. Moreover, climate induced supply chains have been evolved here, due to which export oriented production source has been invented for the international market. However, structural inequality has hindered export growth of the industry. The policies are currently ineffective for mitigating the issues. cutting-edge technologies, such as IoT, AI and others will be important for resource allocation, and other activities.

Table of Contents

Chapter 1: Introduction	12
1.1 Chapter Introduction	12
1.2 Research Background	12
1.3 Problem Statement	14
1.4 Research Rationale.....	15
1.5 Research Aim and Objectives	16
1.6 Research Questions	16
1.7 Research Significance	16
1.8 Research Methodological Overview	17
1.9 Structure Overview of Research	17
1.10 Chapter Summary	18
Chapter 2: Literature Review	19
2.1 Chapter Introduction	19
2.2 Conceptual and Theoretical Background.....	19
2.2.1 Key Concepts	19
2.2.2 Theoretical Frameworks	20
2.3 Macroeconomic Factors and Agricultural Export Decisions in India	21
2.3.1 Inflation and Cost Structures in Agriculture	21
2.3.2 Exchange Rate Movements and Export Competitiveness	22
2.3.3 Trade Policies, Tariffs and Subsidies.....	23
2.4 Socioeconomic Factors, Policy Reforms and Producer Participation	24
2.4.1 Farm Size, Education and Access to Information.....	24
2.4.2 Institutional Support and Market Access	24
2.4.3 Policy Reforms in Indian Agriculture	25
2.5 Technological Innovation and the Reduction of Economic Constraints	26
2.5.1 Digital Technologies and Market Information Systems	26
2.5.2 Precision Agriculture and Productivity Enhancements	26
2.5.3 Supply Chain and Logistics Innovations	27
2.6 Integrated Discussion and Research Gap.....	28
2.6.1 Interactions between Economic Conditions and Marketing Decisions	28
2.6.2 Identified Gaps in the Literature	28
2.6.3 Link to Research Objectives	29

2.7 Conceptual Framework.....	29
2.8 Chapter Summary	30
3.1 Aim and objectives	31
3.2 Chapter introduction	31
3.3 Onion.....	31
3.4 Philosophy.....	32
3.5 Approach.....	33
3.6 Design	33
3.7 Strategy	34
3.8 Choice	34
3.9 Data collection method	35
3.10 Data analysis technique.....	36
3.11 Validity and reliability	37
3.12 Limitations	37
3.13 Ethical consideration.....	38
3.14 Timeline	39
3.15 Chapter summary	39
Chapter 4: Data Analysis	40
4.1 Chapter Introduction	40
4.2 Overview of Data Sources	40
4.3 Data Screening and Organization	40
4.4. Theme Coding and Development	49
4.5 Analysis of Themes and Sub-Themes.....	53
4.5.1 Theme 1: Influences of Trade Policy and Macroeconomic Conditions on the Performance of India's Agricultural Export.....	53
4.5.2 Theme 2: Policy Determinants and Socioeconomic Determinants of Producer Participation within Domestic and International Markets	55
4.5.3 Theme 3: Technological Innovation as a Crucial Mechanism for Improving Competitiveness and Reducing Economic Constraints	57
4.6 Research Objectives based on Findings.....	59
4.6.1 Impact of Macroeconomic Factors on International Marketing Decisions	59
4.6.2 Influence of Socioeconomic Factors on Producer Participation in International Markets	62

4.6.3 Role of Technological Innovation in Reducing Economic Constraints and Enhancing Competitiveness.....	63
4.6.4 Integrated Analysis Across Research Objectives	63
4.7 Summary of Findings.....	64
4.8 Chapter Summary	64
Chapter 5: Discussion	66
5.1 Introduction.....	66
5.2 Objective based analysis	66
5.3 Key findings.....	68
5.4 Research Limitations and Their Impact on Findings.....	69
5.5 Alignment with Existing Literature	70
5.6 Differences with Existing Literature with this research	70
5.7 Surprising Findings.....	71
5.8 Mitigating the literature Gap.....	71
5.9 Significance of the Research.....	72
5.10 Conclusion	73
References.....	74

List of figures

Figure 1: Import and Export of Indian Agriculture	12
Figure 2: Export of Indian Agriculture by Country	13
Figure 3: Conceptual Framework	30
Figure 4: Research Onion	32
Figure 5: Methods of data collection	35
Figure 6: Research timeline	39
Figure 7: Indian Agriculture Sector	54
Figure 8: Currently India's Export Networks	56
Figure 9: Current Situation for Adoption of Technology in the Indian Agriculture Sector	59
Figure 10: Framework for Organized Market.....	60
Figure 11: Trends in Agricultural and National Exports from India during post-WTO regime (1995–96 to 2021–2022).....	61

List of tables

Table 1: Data screening and organisation	49
Table 2: Thematic coding	53

List of abbreviation

AI: Artificial Intelligence

BT: Bacillus Thuringiensis

GDP: Gross Domestic Product

GATT: General Agreement and Trade and Tariff

HYV: High Yielding Variety

IoT: Internet of Things

IMF: International Monetary Fund

WTO: World Trade Organisation

RFID: Radio Frequency Identification

Glossary

Agricultural exports: Selling agricultural products in different markets.

Cost structure: Composition of fixed and variable cost

Exchange rate: This is the value of currency in a country compared to another country.

International marketing decisions: Choices regarding pricing, entering new market, promoting business, and distributing products in international markets.

Precision agriculture: Engaging cutting-edge technologies for optimising agricultural production and using resources.

Producer participation: Engagement of farmers and agricultural businesses in both local and international market.

Chapter 1: Introduction

1.1 Chapter Introduction

The present chapter will establish the core structural foundation for the dissertation by introducing the research background and critical justification of the main research problems, objectives, and questions. In addition, this will provide a specific research purpose and direction for effective investigation and creation of a roadmap for research. This will critically evaluate the research dynamics in the context of the Indian "Agriculture Sector". Therefore, it will talk about the market volatility, policy uncertainties, and economic conditions as inflation impacts on the agriculture sector's international marketing decisions. Moreover, this chapter will represent the research "objectives, aim and questions" to set a clear path and direction for conducting the research. In addition, this will represent the methodological overview, overall dissertation structure, and indicate the research significance in real-world applications in the future.

1.2 Research Background

The Indian Agriculture sector is the core foundational pillar of the country's economic development due to its combined influence on "food security, export performance, and employment generation". As the global agriculture producer, India actively participates in the agrifood trade, as the massive business of export and Import of Indian agriculture by 2023 to expand into international markets.

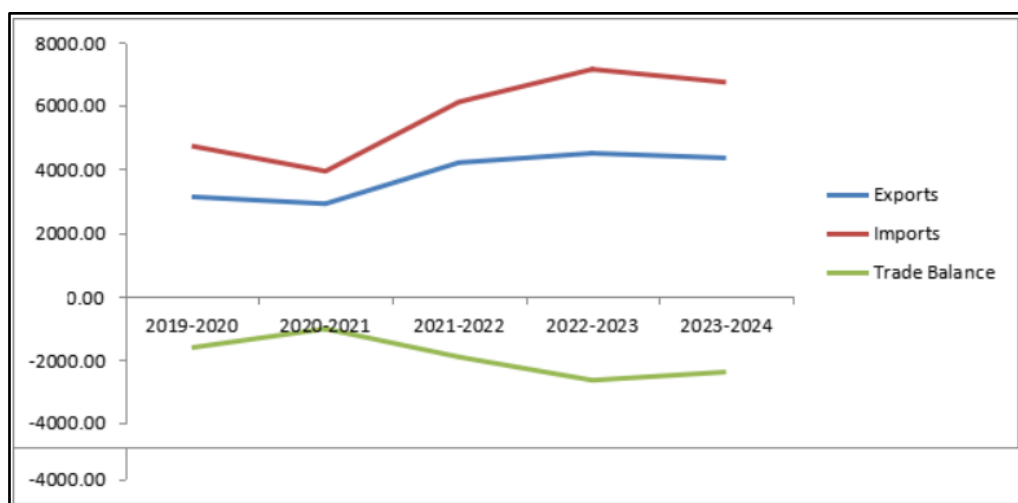


Figure 1: Import and Export of Indian Agriculture

(Source: Commerce, 2023)

As seen in Figure 1, by 2024, Indian Agriculture will have “high import and export”, with exported major products being "Rice, Spices, Oil Meals, Coffee, Fresh Fruits, Sugar and more", where Import is more than export, above 6000 (Commerce, 2023). In this context, critically, the sector currently operates in the widest range of environments that are influenced by the macroeconomic conditions that influence production efficiency and trade policies. The current situation highlights the influence of international marketing decisions and relations on the competitiveness, pricing, and market selection.

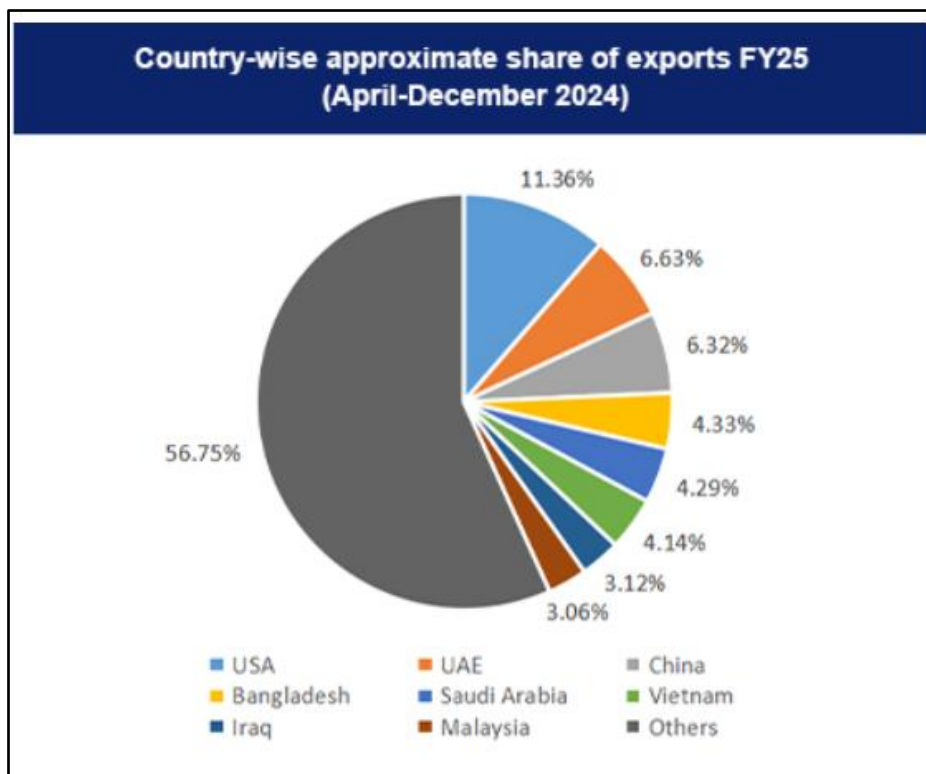


Figure 2: Export of Indian Agriculture by Country

(Source: IBEF, 2024)

In Figure 1, it can be seen that India's agricultural exports indicate diversified international market presence among "Europe, North America, Asia, China, and other countries" (IBEF, 2024). This shows the opportunities of global supply chains and value creation by the Indian Agriculture sector. However, this much potential is faced with significant challenges, such as "cost volatility, limited technology access and logistical inefficiencies", as the major exporter

of "spices, horticulture products and grains". These are the core obstacles to quality and consistency for international demand fluctuations.

The future of Indian agriculture mostly depends on the improvements regarding "technology adoption, market responsiveness, and resource productivity" to manage economic and societal factors (Goyal et al., 2025). The specification of the main research challenges depends on the involvement of "exchange rate fluctuation, inconsistent policy frameworks, and inflation pressure" for export-oriented decision-making in the agriculture sector. The lack of access to "financial literacy to all farmers and inconsistent supply-chain infrastructure" limits the strategic growth and limits access in global markets. Consequently, the understanding of the relationship between international marketing decisions and economic conditions is valuable to empower and foster the sustainable growth of India's current competitiveness within the agriculture sector.

1.3 Problem Statement

The Indian Agriculture sector actively operates within a volatile economic condition where changes directly impact the international marketing decision. The constant inflation changes with inconsistent trade policies and unstable exchange rates show ineffective pricing strategies and reduce market competitiveness. The main challenges are the interpretation of the macroeconomic factors' instability, which impacts the marketing strategy. The fluctuations within global commodity prices and exchange rates are impacting the viability of exports. The existing research discussed the specific relationships between the economic factors and the Indian agricultural context. The economic or inflation fluctuations foster the uncertainty for the producers, which shows the global markets for the impactful revenue, and the stability in the agriculture sector (Abdullahi et al., 2021). These issues, such as a lack of technological knowledge or adaptation to economic changes, are significant obstacles to effectively participating in the international agricultural business market. The current international marketing models are particularly lacking a comprehensive framework focused on the strategic practice and economic theory. The main issue is the misalignment between the "international marketing decisions and realities of economic situation", which restricts value creation and market expansions (Sahu, Pani and Santos, 2022). The current research gaps effectively limit the value creation of the optimal positioning of the products and take sustainable market decisions. The aim of this research is to create an effective "predictive framework" with consideration of "economic, technological and social factors" changes to

foster responsive strategic planning. Moreover, the framework can improve the global competitiveness of the Indian agriculture sector to enhance the stability in international markets.

This limits the ability of the sector to gain the competitive advantage it is focused on in the high-value international markets (Jacob, Raphael and Ajina, 2022). The lack of understanding of the economic aspects or factors by policymakers and industry actors prevents them from designing effective targeted interventions (Sahu, Pani and Santos, 2022). Moreover, the detailed research on the problems, such as "exporters lack understanding of the changing economic situation, can shape the international marketing strategies.

1.4 Research Rationale

The research on the Indian agriculture sector is valuable due to a high amount of structural, social and economic constraints for global competitiveness. Indian producers are faced with difficulties due to the "limited access to digital capabilities, inconsistent policy support, and uneven resource access" across the country. These conditions show the core research gaps between the domestic production realities and international market expectations. Furthermore, the core issue is due to a lack of research and knowledge regarding trade policies and socioeconomic actors in market choices. Furthermore, the relationships are notable due to the highlight of the technological improvements and targeted policies to reduce the economic vulnerabilities.

This is a notably critical issue due to the expansion of global agriculture markets for "high technology-intensive, sensitivity to economic volatility and standards-driven" economic factors (Sindakis and Showkat, 2024). These kinds of relationships are notable due to the export readiness, pricing strategies, and market selection. The sector needs the strategic guidance and standards-driven international environment for growth.

The main problems are constant macroeconomic instability, which disrupts the profitability, weakens the long-term planning, and affects export pricing. The macroeconomic trends regarding "trade policies, inflation fluctuations, exchange rates, technological innovation, and socioeconomic factors" shape the decisions for international markets (Ravi, Naidu, and Shafiwu, 2024). Therefore, the current research will shed light on how economic conditions impact the strategic marketing regarding the agricultural export of India.

1.5 Research Aim and Objectives

Aim

This paper will critically analyse the economic conditions affecting the international marketing decisions in the agricultural sector in India, and the main concern will be to determine the challenges and strategies that improve global competitiveness and sustainability.

Objectives

- To discuss the effects of macroeconomic factors like inflation, exchange rates, and trade policies on export policies in agriculture.
- To determine the influence of socioeconomic factors and policy reforms on the involvement of producers in the international markets.
- To understand how technological innovation can help reduce the economic limitations and improve competitiveness.

1.6 Research Questions

RQ1: What impact do the changing economic conditions have on influencing the international marketing decision in the agricultural sector in India?

RQ2: How do socioeconomic variables affect the participation of farmers in the international agrarian markets?

RQ3: What are the ways in which technological innovations can enhance the availability of Indian farmers in the international market?

1.7 Research Significance

The research is most significant because it effectively addresses the existing research gaps for the interconnection between international marketing decisions and economic conditions. The existing research is mainly focused on the macroeconomic trends and production efficiency for a combined approach in the export strategies (Saha, Sinha and Saha, 2023). The research effectively contributes to the body of knowledge through the integration of technological, socioeconomic and core economic factors through a unified framework (Saha, Sinha and

Saha, 2023). Research on the Agriculture sector is highly beneficial for “data-driven decision-making and expansion” of the agriculture business of India. The findings of the research will benefit the agricultural “industry stakeholders, farmers, exporters, policymakers, and agribusiness organisations” through offering evidence-based strategies. The research will also highlight the practical implications for “market analysis and recommendations” for interventions. This will also empower future research through prioritising the areas and unresolved challenges for empirical investigations.

1.8 Research Methodological Overview

The research will implement the “Secondary Qualitative” through “Interpretivist Research Philosophy” through the effective explanations and profound impacts of economic factors within international marketing decisions. “Interpretivist Philosophy” helps to understand the complex meanings, subjective and contextual meanings, to evaluate the relationships of different factors (Pervin and Mokhtar, 2022). This will help to convert the marketing choices and economic conditions in matters of stakeholders. This approach will help to represent valuable insights and explanations to analyse the impacts of economic factors in the Agricultural industry of India. This will apply the "Inductive Approach", which helps to analyse the facts based on the lens of documented evidence and existing theories in the academic context (Proudfoot, 2022). This approach will help to shift from observations to the development of nuanced theories and brand patterns by using different frameworks. This adopts the "secondary research strategy" that is focused on the governmental, industry-data relevant, and credible academic sources to conduct the research. This will also include the "thematic data analysis" that supports the active systematic identification to analyse the economic influencers through marketing behaviour. The methodological designs can help to foster the "transparency, alignment with ethical experiences and coherence" with the research ethics.

1.9 Structure Overview of Research

The current study chapter to build the coherent analytical chapter roadmap is as follows:

Chapter 1: "Introduction" will effectively introduce the research topic, aims, objectives, problem, research questions, and methodological roadmap.

Chapter 2: Critically analyses the existing literature focused on socioeconomic, technological, and economic factors that impact the international marketing decisions.

Chapter 3: Evaluating the methodological design, which includes research approach, philosophy, analysis methods, and timeline.

Chapter 4: It will represent the thematic patterns, interpretation of collected secondary data, and findings with research limitations.

Chapter 5: This will effectively represent the thematic analysis and discussion on research findings.

Chapter 6: It will talk about the theoretical insights, recommendations, time line and research conclusions along with future implications.

1.10 Chapter Summary

This current chapter fosters the foundation of conducting a study through creating the roadmap of research background, aims, questions, and objectives. This highlights the chosen methodology, technical considerations, and academic significance of the research. Therefore, this chapter offers an overview of the research structure and the path for the next chapters.

Chapter 2: Literature Review

2.1 Chapter Introduction

Decisions of marketing in the agricultural sector in India are a major and critical issue, as India is a country with an agriculture-based economy and a major and prime earning sector for households. Many economic conditions, like the demand of the consumer for agricultural products, the production costs of raw materials for agriculture, export-import policies, and the foreign rate of exchange, are a lot of economic conditions that influence the international marketing decisions in the agricultural sector in India. A comprehensive literature review on Indian agriculture reveals the many dimensions of the economic conditions and their effect on the international marketing in the agricultural sector in India, which can give researchers a clear idea of what has been done so far and where there are gaps that need filling.

2.2 Conceptual and Theoretical Background

2.2.1 Key Concepts

Influences of the economic conditions on international marketing create positive and negative effects on the producers, consumers, stakeholders, and agro-based companies in India. Economic conditions like higher revenue, lower costs of inputs, and credit availability for farmers positively impact the production side of agricultural productivity in India. On the other hand, some economic conditions, like price volatility of agricultural products, create income uncertainty for producers or farmers and make them less interested in investing in the agricultural sector, which creates a negative impact (Kumar et al., 2025). Stability in income, low inflation, credit availability at low interest rates, technological innovations, and proper foreign exchange are such economic conditions that influence the Indian agricultural market positively. Income stability and a low inflation rate enhance the purchasing power of the consumer, which enhances the demand for agro-based products that can uplift the quality of those products.

Therefore, the cost of agricultural products becomes low, and the demand for those factors of agricultural production, like seeds, becomes high, and stakeholders and investors become eager to produce in the agricultural sector with less business risk, and the overall demand and profitability of the agricultural sector tends to be higher (Thakur et al. 2025). If the credit interest rate becomes low, then the price of the agricultural commodity becomes low, which

indicates the price stability condition for agro-based products in the market, which is beneficial for consumers. Due to stable demand, the return on the investment for the production is high, which encourages the investors and stakeholders to invest more. Technological advancement in the agricultural sector ensures the high productivity of agricultural products and the productive efficiency of Afro-based goods (Manogna, Dharmaji, and Sarang, 2025). A negative economic condition, like price volatility, affected the people in India because they are mainly from a low-income background, which may create food insecurity for them and reduce the consumption of agro-based products, which negatively impacts the agricultural market (Saha, Prusty and Nanda,2025).

2.2.2 Theoretical Frameworks

The decision of international marketing in the agricultural sector in India integrates some economic theories that follow some economic principles. This will involve going through relevant materials published over the last three years and following such principles as those that deal with the issue related to decision-making marketing in the agricultural sector. Two theories, Porter's Diamond theory and the Uppsala Model of agricultural products, have been employed to assess the impact of the economic condition on the marketing strategy of agriculture. The framework is dependent on two major streams of management – value chain analysis (VCA) and strategic competitiveness (Sagheer, 2020). Therefore, in this research, this framework will be highly useful for indicating the strategic competitiveness of the Indian agricultural industry for implementing global marketing decisions in their activities, overcoming the financial constraints through their value chain. Through the Porter's Diamond model, the factor conditions in the market can be judged. Therefore, the strategies of the Indian agricultural firms can be measured considering the financial factors that impact their international marketing decisions.

Porter's Diamond theory is often referred to as the Porter Diamond Theory of National Advantage. In this analysis, this theory helps to understand the competitive advantage of an agricultural product that a nation possesses due to certain factors available there. Four major factors of this theory are- Factor conditions, related and supporting industries, strategy, structure, and rivalry and demand conditions (Afshar and Shah, 2025). Factor conditions are those elements that Porter believes a country's economy can create for itself. In this context, skilled labour, technological innovation in agriculture, infrastructure, and capital allocation for agriculture are major factors. An agricultural firm facing rivalry leads it to find a way to

increase production and the development of technological innovations. The competition brings prosperity to a nation's domestic market. An agricultural firm's inner strategy to beat its competition, making a strong structure, is a major factor in this theory. Many economic influences facilitate innovation through their support and by exchanging ideas. With technological innovation and production improvement, the demand for agricultural commodities increases, and by giving feedback, producers or farmers can get to know the customer's choice for that product, which enhances the productivity of agricultural goods. This is a positive influence of economic conditions on the agricultural sector (Chauhan and von Wehrden, 2025)

Another theoretical model is the Uppsala model of internationalisation. According to this model, a domestic market can enter a foreign market. That is clearly explained. Following those stages, a company can easily move into the foreign market (Mehdaoui and Moufdi, 2025). For the Indian agricultural sector, it is a very useful framework to enhance its international marketing. The primary step is to avoid all the regular activities of export. By following this step, the agricultural sector can avoid regular tariffs. If export is necessary, then do it through any sales representative. This can promote marketing and maintain the privacy of the agricultural sector. Next is to establish a foreign sales subsidiary, which can build a strong local network of distribution of agricultural products. Last is the establishment of a manufacturing unit in a foreign country that can enhance agricultural marketing (Mahedi et al., 2025).

These two theoretical approaches clearly depict a positive correlation between the positive. The Influence of Economic Conditions on International Marketing Decisions in the Agricultural Sector in India.

2.3 Macroeconomic Factors and Agricultural Export Decisions in India

2.3.1 Inflation and Cost Structures in Agriculture

Inflation affects the agricultural activities in many ways. Due to low inflation, the national income of a country goes up, which attracts investors to invest in agricultural goods. It indicates growth in the agrarian market and generates demand for agricultural products. The role of food prices is vital for people living in low- and middle-income countries like India, as they spend a high share of their income on food items (Okezie et al., 2025). As the earlier literature suggests, there can be interlinkages between food prices, non-food prices, and rural

wages. On the other hand, Beriya (2022) mentioned that high inflation increases the cost of fertiliser and seeds, which increases the production cost of agricultural goods, which decreases the demand for the product. So, the investors become less interested in investing, and also the purchasing power of the consumer decreases. The aggregate demand of the agricultural product decreases (Okezie et al., 2025). Due to inflation, the price of goods and services increases in each period of time. The price of overall agricultural goods and services increases due to inflation, which reduces the demand for the product (Okezie et al., 2025). Inflation negatively impacts the agricultural economy because investment in agricultural products decreases. (Beriya, 2022) The Indian federal government is actively promoting drones for agricultural spraying. These 'Kisan drones' are primarily intended to cut down time, increase efficiency, and efficacy of resource utilization in agricultural sprays. Unit economics of drone spray cost per acre vis-à-vis manual labour cost are also catching up. Due to the rise in interest rates, the purchasing capacity of the consumer decreases, and production uncertainty arises. Agricultural products face a huge level of marketing competition from other goods, which reduces their demand and sales. So, the farmers' living standard becomes low. Unemployment increases in the agricultural sector, and agricultural welfare declines (Okezie et al., 2025).

2.3.2 Exchange Rate Movements and Export Competitiveness

Another important determinant of agricultural export decisions highlighted in several studies is the exchange rate and export competitiveness, which is the rising cost of cultivation. The real wage rates of farm workers rose at 5 per cent per annum between 2000 and 2012 due to the implementation of MNREGA, even as input prices rose. This cost-push factor squeezed agricultural farms' profit margin, which may reduce the competitiveness of exports (Ali Warsame and Hassan Abdi, 2023). Exchange rates of agricultural exports are different in each country. Comparing the average trade exchange rate and the income from trade from agricultural exports, it clearly shows that there is a positive correlation between the trade exchange rate and income from trade. Contrarily, as per Kayani (2023), the emergence of behavioural finance as a discipline offers a comprehensive explanation for many of these anomalies by integrating psychological insights into economic decision-making. Therefore, the financial calamities in the Indian agricultural market can be considered positive for driving the firms to develop stronger international marketing decisions accordingly.

In the case of agricultural export income, trade positively influences the exchange rate (Abdi, Zaidi and Karim, 2023). For the agricultural product, if the volatility of the exchange rate is high, then the volume of export of the agricultural product becomes high (Kastratović, 2024). There is a positive relationship between the exchange rate and the volume of agricultural exports, which gives a clear conclusion that the exports of agricultural goods become cheaper as the value of the currency of a country depreciates, which makes agricultural goods more competitive in the global market (Mukaila, 2023).

2.3.3 Trade Policies, Tariffs and Subsidies

Though globalisation takes place, the share of export of agricultural products from the underdeveloped countries is limited (Jadhav, 2025). Trade policies, tariffs, and subsidies on agricultural exports have a positive impact on the agricultural products of developing countries (Choi et al., 2025). Many scholars documented in their studies that international trade, tariffs, non-tariff barriers, and subsidies have a positive impact on the regional trade of agricultural products (Luckstead, 2024). Some meta-analysis in recent studies shows that trade policies and tariff measures have an impact on food quality and improve the standard of food safety in developing countries (Ridley, Luckstead, and Devadoss, 2022). Through globalisation, the trade policies between the developed and the underdeveloped countries can achieve an economic scale. On the other hand, the international agreement was due to resistance from the US, as it ostensibly affected US sovereignty (Anderson, 2023). The US also ensured that its domestic policies and laws were not undermined due to the GATT. The US was the main exporter of agricultural goods which had its Agricultural Adjustment Act of 1933 which enabled its government to resort to tariffs and quantitative controls and export subsidies and through the trade policies, tariffs and subsidies on agricultural production, the production cost of the agricultural sector declines, as a result, the price of agricultural products declines, which shows a comprehensive structure of declining the aggregate cost of agricultural production in the developing nations and enhances the demand for those products in the international market (Kareem, 2022). Some scholars show that Indian trade liberalisation policies on price incentives and farm incomes are a driver of agrarian export. Specifically, for non-tradable crops like coarse cereals and pulses, the output-to-input price ratio declines. Import liberalisation led to a fall in prices of these domestically consumed crops (Luckstead, 2024).

However, when agriculture was brought into the negotiation agenda of the GATT Uruguay Round, developing countries had mixed feelings (Nanda, 2022). While there was substantial hope that this could herald a new era that could usher in the economic development of developing countries like India, at the same time, there were substantial concerns that if things did not move the way it was expected, it could also jeopardise the livelihoods of millions in developing countries

2.4 Socioeconomic Factors, Policy Reforms and Producer Participation

2.4.1 Farm Size, Education and Access to Information

Small farm size is important for the commodity market growth in the economy. The participation of farmers in the commodity market enhances the consumption of agricultural products of the consumer, reduces the poverty of the agricultural households, and keeps the food quality high in the international market (Surendran-Padmaja and Ojha, 2025). Price and operational efficiency are two key measures of components of market efficiency for agricultural commodities. Price efficiency of agricultural products indicates the proper allocation of resources in the market and maintains a positive correlation between the production of agricultural goods and the international market, which ensures the stability of the equilibrium condition of the demand for agricultural products and the supply of agricultural products (Chauhan, Varma, and Singh, 2025). Operational efficiency indicates that the agricultural market gains a higher revenue efficiency that may reduce the operational cost and gain the profit of selling each commodity, which indicates a higher profit margin of the agricultural product in the international market (Thakur et al., 2025). Educational enhancement of the agricultural farmer increases the knowledge of crops and the production procedure of farmers, which helps them to enter directly into the international market (Dey and Singh, 2025). Proper information about the resources plays a central role between the producer and the consumer of the agricultural product in the global market, which reduces the information bias and enhances the optimal satisfaction of the consumer and the profitability of the producer (Hoq et al., 2021).

2.4.2 Institutional Support and Market Access

Some studies highlighted the role of institutional support and market access in accelerating the farm's marketing. Commercialisation of agriculture with a supportive institutional mechanism enhances the marketing of agricultural commodities. Proper extensions, much

availability of collective bargaining channels, and proper legal safeguards play a crucial role against the exploitation of the agricultural market risks and volatility (Thomas et al., 2025). Proper observations of institutions on the middleman, money lenders, and input dealers prohibit the exploitation of the information asymmetries, which can mitigate the cost-push inflation of inputs and keep the stability of the interest rate (Thakur et al., 2025). Market access of farmers exhibits the collective bargaining power of the farmers. Proper market access and institutional support structured the storage infrastructure properly and improved the transportation, which enriched the global marketing of the agricultural products (Vasudevan, Arokiasamy and Cheng, 2025). Institutional support can also improve the irrigation quality, improve banking credit to the marginal farmer in the rural area, and stabilise the crop price in the global market (Findlay and Roelfsema, 2025). Institutional support, like counselling of the farmers and proper education of the farmers, prohibits them from using chemical solutions in the agricultural production, which implies a good quality of the agro-based product and generates high demand for those products in the international market (Steinhuebel-Rasheed et al., 2025). Institutional support and market access are two essential components for the agricultural upgradation of India in the global market.

2.4.3 Policy Reforms in Indian Agriculture

Agrarian reforms are the major and important aspects for the agricultural marketing improvement in the global market. In Indian agriculture, there is the use of HYV seeds. It is a replacement for conventional seeds. It leads to an increase in crop productivity. In 2016-2017, 6.2 lakhs quintals of HYV seeds were distributed among the farmers (Hansø, 2025). To protect crops against diseases of insects, insecticides and pesticides were used. 14 central plant protection centres have been set up. Scientific farm management practices have been introduced. Selection of crops and their quality, preparation of soils, rotation of crops, selection of seeds, and use of fertilisers are the specific steps for this process (Chauhan, Varma and Singh, 2025). Institutional reforms, known as land reforms, were introduced to increase the production and the productivity of the agricultural sector. Also, the government reduces the rent from farmers, so that the rent does not exceed 1/3rd of the production (Pathak et al., 2025). Many agricultural credit societies have been made to give loans to the farmers. Currently, 94,647 primary agricultural credit societies, 768 primary cooperative agricultural societies, and rural development banks are working in the country. The number is

going from day to day. 72% of the total institutional credit is provided by the commercial banks (BIRTHAL et al., 2025).

2.5 Technological Innovation and the Reduction of Economic Constraints

2.5.1 Digital Technologies and Market Information Systems

According to the Rajya Sabha information, a lot of technological innovations are being taken in agriculture. IDEA released, and here it is clearly mentioned that many digital technologies will be adopted as a digital revolution (Vasudevan, Arokiasamy and Cheng, 2025). Digital technology and the market information system are correlated with each other. With proper digitalisation, marketing of the agricultural product promotes marketing efficiency globally (Vuvor et al., 2025). The innovation of digital mobile enhances the value chain and reduces the cost of transaction. The access to transformation has been improved (Masood, Ahmed, and Kareem, 2025). AI-driven technological innovation is necessary. It is necessary to be aware of all the factors of digital accessibility (BIRTHAL et al., 2025), AI personalisation, customer behaviour, brand positioning, and customer loyalty with the help of the latest periodical studies. AI helps to enhance strong brand positioning through efficient targeting and data-based differentiation credibility (Pathak et al., 2025).

2.5.2 Precision Agriculture and Productivity Enhancements

Genetic engineering has made it possible to introduce certain strains into other genes of crops or animals. Such engineering boosts the resistance of the crops to pests, like BT cotton and droughts. Through technological innovation, farmers are in a position to electrify every process of efficiency and improve production (Nowfal et al., 2025). Technological innovation enhances agricultural productivity. Use of modern technology reduces soil degradation and reduces chemical application. It can enhance the proper use of the irrigation facility (Nayak et al., 2025). The technological and aerospace industry continuously innovates to take the intellectual property perfectly. Through innovation and technological upliftment, the agricultural industry holds the maximum market share. It focuses on technological development to make its position high in the global market competition. It also secures and maintains the technological innovation for future enhancement and keeps stable competition in the globe (Vuvor et al., 2025). The renewable energy sector primarily enhances its investment through agricultural subsidies in India (Mahedi et al., 2025). Some firms can elevate the effectiveness of the supply chain to be more flexible. This organisation focuses on

product innovation and the design of its products. This can enhance its demand and standards in the overall world.

2.5.3 Supply Chain and Logistics Innovations

Through digital tool incorporation, agriculture not only transforms its business structure but also the value of its customers. Cloud-based systems and digital modern analytical technologies are currently the basis of this company, which enhances its potential to track demand time to time, optimising the management of the inventory system, which improves supply chain efficiency and stimulates the movement of goods within nearly all of its worldwide logistics networks (Vuvor et al., 2025). On the other side, the supply chain literature includes agency theory, transaction cost theory, organizational information processing theory, and opportunity cost theory in revenue risk management (Tripathi, 2023). The paper models a structured iterative algorithmic framework that leverages the forecasting capacity of different time series and machine learning models, considering the effect of influencing factors on agricultural price movement for better forecasting predictability against market variability or dynamics. It also attempts to formulate an integrated risk management framework for effective sales planning decisions that factors in the associated costs of storage, rental, and physical loss until the surplus is held for expected returns. In the future, some of these technologies can be utilised for enhancing performance, like artificial intelligence (AI), which can be used for optimising tasks automatically and analysing big data, which can improve the accuracy for the identification of demand trends and allocation of resources optimally, and can use the Internet of Things. (IOT) and the tags of RFID, which mobilise its supply chain across its entire logistic networks, also promote its logistic system. It can incorporate blockchain technology, which can enhance its product tracking system, which will give customers confidence in their buying (Nayak et al., 2025). (C, S.I,2025)

To reduce the transportation costs of agricultural commodities, the government can improve its transportation planning and loading capacity by incorporating AI-driven automated technologies (Dabić et al., 2025). Reducing time variation, proper observation across containers, and an IoT-enabled tracking system can be used (Kumar, Chandel and Chandel, 2025). For reducing logistic cycle time, a cloud-based automated transportation management system can be improved (Sharma, Gupta and Aggarwal, 2025). By enhancing these technologies, agricultural production can achieve lower costs, faster delivery, and improve its

sustainable logistics system. Introducing cloud system order routing to reduce transport cost (Shillie, Sangnyuy and Mbah, 2025).

2.6 Integrated Discussion and Research Gap

2.6.1 Interactions between Economic Conditions and Marketing Decisions

The interaction between economic conditions and marketing decisions raises some issues. Economic conditions sometimes influence the decisions. Inflation, cost of production, etc, are such situations that affect the overall marketing condition. This interaction may play a crucial role in advising the marketing decision. Decisions of marketing in the agricultural sector in India are a major and critical issue, as India is a country with an agro-based economy and a major and prime earning sector for households. Many economic conditions, like the demand of the consumer for agricultural products, the production costs of raw materials for agriculture, export-import policies, and the foreign rate of exchange, are a lot of economic conditions that influence the international marketing decisions in the agricultural sector in India. On the other side, the developing countries' economy is dominated by hydrocarbons over exports, which have reached 98% in recent years (Mareeh et al, 2025). This may have bad consequences in case oil prices collapse or fuel prices, taking into account that these are related to political, economic, and social variables occurring in the world. Besides, hydrocarbons are vital, yet they are on the way to disappearing.

2.6.2 Identified Gaps in the Literature

There are also some potential limitations in the existing literature. Firstly, the data on agricultural marketing may not fully reflect the actual situation due to underreporting. Secondly, treating all farmers in the same way overlooks differences in their experiences based on factors like region, social groups, or crop choices.

Thirdly, findings from specific states may not apply to the entire country, given its diverse agricultural landscape. To address these limitations, my study will involve data analysis, recognize the diversity among farmers, emphasize farmers' collective agency and coping strategies, consider regional variations, and focus on ecological factors like water stress and climate change. The existing papers on the Indian food industry's competitiveness or supply chain are very limited. There is also limited literature on India's agrifood sector. This has reduced the scope for published references from India.

External pressures from the IMF-World Bank also provide an alibi for states' abandonment of farmer livelihoods through conditional lending policies. But power asymmetries allowing industrial lobbies greater sway over policy priorities relative to fragmented farmer groups need dissection. Lack of proper resources makes life more difficult for marginal farmers. This study will try to suggest ways to improve the situation for small-holding farmers. With the help of specific data regarding the Indian agricultural sector from literature and the Indian and international government websites about the Indian agricultural sector, this research will explore the current financial condition of the stated industry. Moreover, this research will also critically explain the impact of the economic condition on the international marketing associated decisions and activities of the industry.

2.6.3 Link to Research Objectives

- Through the review of literature, discuss the effects of macroeconomic factors like inflation, exchange rates, and trade policies on export policies in agriculture.
- Some studies have been done by scholars to determine the influence of socioeconomic factors on the involvement of producers in the international markets.
- Some modern studies highlight how technological innovation can help reduce economic limitations and improve competitiveness.

2.7 Conceptual Framework

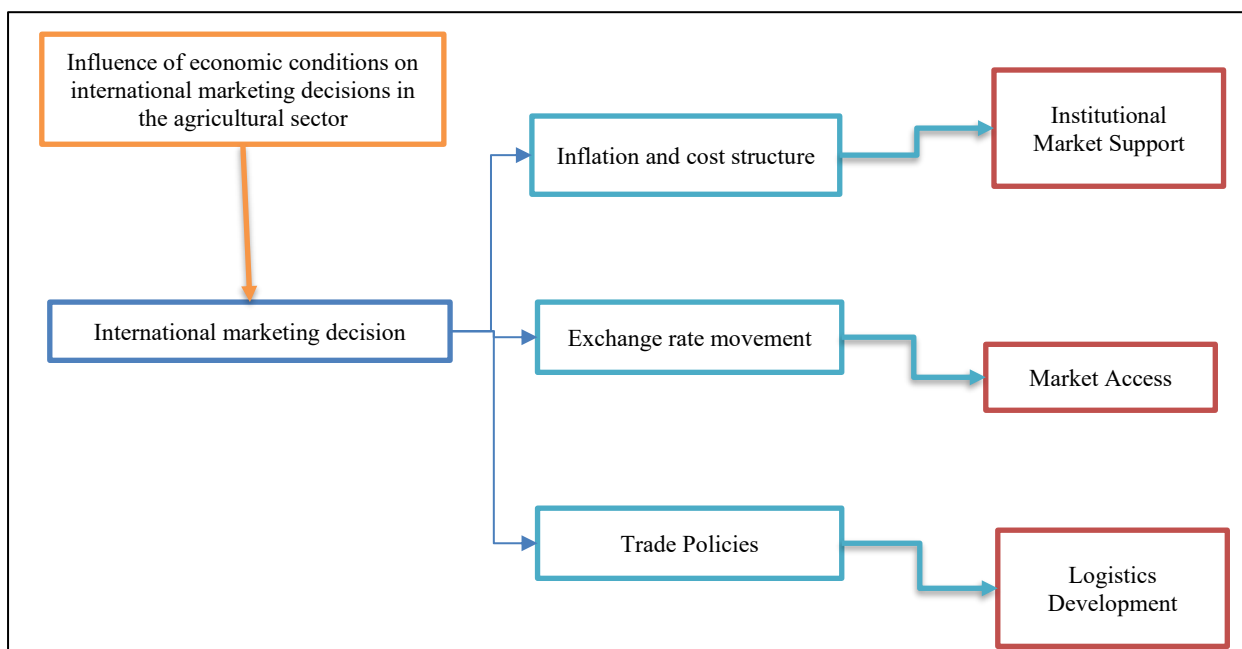


Figure 3: Conceptual Framework

(Source: Self-Created)

2.8 Chapter Summary

Decisions of marketing in the agricultural sector in India are a major and critical issue, as India is a country with an agro-based economy and a major and prime earning sector for households. Many economic conditions, like the demand of the consumer for agricultural products, the production costs of raw materials for agriculture, export-import policies, and the foreign rate of exchange, are a lot of economic conditions that influence the international marketing decisions in the agricultural sector in India. In this chapter, there is a comprehensive discussion review on Indian agriculture that reveals the many dimensions of the economic conditions and their effect on the international marketing in the agricultural sector in India, which can give researchers a clear idea of what has been done so far and where there are gaps that need filling.

Chapter 3: Methodology

3.1 Aim and objectives

Aim

This paper will critically analyse the economic conditions affecting the international marketing decisions in the agricultural sector in India, and the main concern will be to determine the challenges and strategies that improve global competitiveness and sustainability.

Objectives

- To discuss the effects of macroeconomic factors like inflation, exchange rates, and trade policies on export policies in agriculture.
- To determine the influence of socioeconomic factors and policy reforms on the involvement of producers in the international markets.
- To understand how technological innovation can help reduce the economic limitations and improve competitiveness.

3.2 Chapter introduction

This is the third and one of the most important parts of a research project. In this chapter, the different plans and procedures of the research project are developed. Here, the research onion has been adopted to finalise the research methodology for analysing the impact of financial circumstances on global marketing decisions in the Indian agricultural industry. Based on this framework, different layers have been unleashed and justified for use in this project. For example, “philosophy, approach, design, strategy, choice, data collection, and analysis” are covered here. Some additional aspects are discussed here to strengthen and clarify the project plan.

3.3 Onion

Research on onions has been used in this study to justify the different methodological choices. This framework is important for providing a glimpse of strengths and weaknesses, so that researchers can choose the most suitable methodology for their research (Mphale, Gorejena and Nojila, 2024).

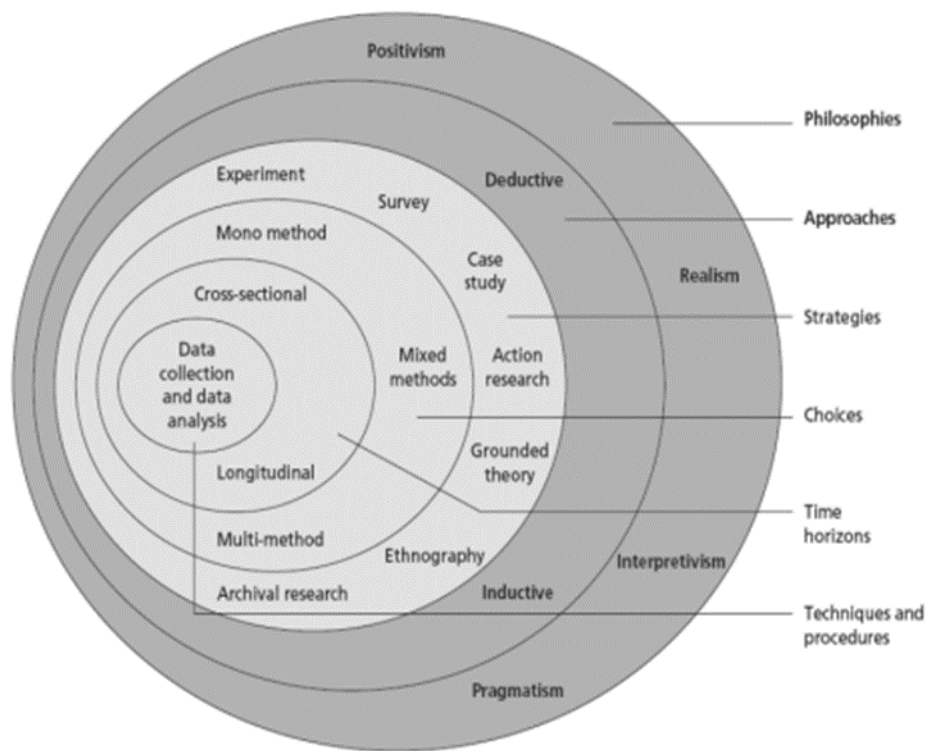


Figure 4: Research Onion

(Source: Mphale, Gorejena and Nojila, 2024)

Therefore, the research onion is implemented here for denoting the methodological process in a systematic, strategic way for solving the research problem. With the help of this, the impact of financial condition upon global marketing decisions in the Indian agricultural sector has been understood prolifically. Additionally, these strategies have been important for pointing out certain areas of challenges along with the solutions for mitigating those to improve international competition as well as sustainability in the industry.

3.4 Philosophy

In the research onion, the first layer is research philosophy, which illustrates the assumptions to understand the research problem, aligning with the concept (Gamage, 2025). With the help of this, a mirror can be created for the researchers, due to which they can work on the project in a more engaged way. Considering the research onion, the philosophies are categorised into three types. These are interpretivism, positivism, and realism. For this project, interpretivism has been most suitable, as it provides more constructive and subjective observations of the data compared to the other types. This has been helpful in analysing the variables in a deeper way, along with maintaining an alignment with the context of this research (Alharahsheh and

Pius, 2020). Interpretivism is also effective for interpreting existing studies. It also helps understand policies and different dynamics in institutions and markets. This has been important for analysing the secondary sources and measuring the global policies and their impact on the marketing decisions in the Indian agricultural sector. Meanwhile, this has been useful in identifying the results of financial circumstances and fluctuations for making decisions for marketing performance in the agricultural industry of India. In this regard, the inclusion of interpretivism philosophy has been useful for indicating the current issues and way out for the companies in the Indian agricultural sector, due to which they can enhance their competitiveness as well as develop a stronger sustainability plan.

3.5 Approach

Research approach has been an essential part of a research project, without which a clearer form of meaning and understanding of the research questions would not be possible. Therefore, new theories can be developed accordingly (Richter et al., 2020). Considering the research onion, the two divisions of approaches are inductive and deductive. The difference between deductive and inductive reasoning is considered in terms of its purpose. For instance, deductive reasoning is focused on testing theories, while inductive reasoning is aimed at developing new theories (Kumar and Ujire, 2024). Inductive narrows down the research questions, due to which it becomes more specific in solving the problems associated with the research topic. In this research, *an inductive approach* has been preferred, as it is mostly associated with qualitative research projects. With the help of this approach, it has been possible to reason specific observations, from which broader discussions have been possible. Therefore, the current economic outcomes of international marketing activities have been measured in the Indian agricultural sector, based on which the current challenges and scope for enhancing competitiveness and sustainability have been measured accordingly. Apart from that, the inductive approach has been beneficial for exploring new topics, based on which newer theories can be developed. Similarly, in this research, the exploration of financial constraints in the Indian agricultural market has been possible due to this approach. Considering this, the impact of global marketing decisions has also been easier.

3.6 Design

Research design is considered the framework or guideline that guides the overall research project to perform according to the plan (Ansari et al., 2022). With the help of research

design, it is possible to achieve objective designation, accumulation of data, analysis techniques, working hours, activities, price, and duty. There are three main types of design: descriptive, exploratory, and explanatory design. Research design is important for making adequate decisions at the different stages of the research. It helps identify unimportant tasks in the project, due to which the overall plan becomes more constructive and engaging for the researchers to focus on the research problem (Ansari et al., 2022). In this research, ***a qualitative descriptive-analytical design*** has been chosen, as it is the most suitable type of design to understand the experience of the population in every aspect. With the help of this, a detailed perspective can be gained regarding different events, due to which the impact of different financial conditions in the Indian agricultural industry can be measured critically. Therefore, the experience of the Indian agricultural market in terms of global marketing decisions has been analysed here through descriptive design, in which the impact of the current economic situation has been considered. Moreover, the existing challenges for the companies and their strategies have been evaluated through this, by which they can gain a competitive advantage along with a sustainable image in their operating market.

3.7 Strategy

Research strategy is the generalised plan for answering the research question. In this regard, it clarifies the objectives of the research, as well as specifying data sources along with considering different constraints underlying the research (Al-Ababneh, 2020). In terms of research strategies, several names can be mentioned, such as “case study, experiment, grounded theory, action research, survey, ethnography, secondary qualitative research, and others.” Among these, ***the secondary qualitative research strategy*** has been selected in this research. However, it can be stated that none of the strategies can be considered better than others for choosing. This depends on the topic, questions, and objectives of the research, along with its extent. The secondary qualitative research strategy has been considered suitable for its general focus on specific cases to answer the research questions. With the help of this, the different macroeconomic factors, such as inflation, exchange rates, trade policies, and others, can be measured in the agricultural sector.

3.8 Choice

Research choice is the process of choosing the best possible path for answering research questions. This is directed by the objectives of the research along with the needs of data,

time, resources, and the intention of contributing to society (Turnbull, Chugh, and Luck, 2020). Research choice can be of three types: "mono, multi, and mixed". The mono method is the process of involving either qualitative or quantitative data in the research. Multi-method involves more than one qualitative or quantitative form of data. Mixed methods engage both qualitative and quantitative data. In this research, *the mono method* has been adopted, as only qualitative data will be enough to measure the influence of socioeconomic factors and policy reforms on the global markets involving producers.

3.9 Data collection method

Data is considered from the family of knowledge, information, and wisdom (Ganesha and Aithal, 2022). Data can be found in different forms, such as numeric, textual, images, opinions, behaviours, preferences, choices, attitudes, and others. Based on these forms, research data can be categorised into two types, primary and secondary. Primary data refers to the practical outcomes of conversations with real-life participants. This is a fresh form of data, which is specifically collected for answering research questions (Ganesha and Aithal, 2022). Primary data can be collected from surveys, interviews, group observation, and other sources. On the other hand, secondary data indicates the existing information used for the different projects and research previously, which are found in multiple articles, newspapers, websites, and books. Therefore, the primary data collection method is associated with more activities compared to collecting secondary data, which makes it more complex for the researchers.



Figure 5: Methods of data collection

(Source: Mazhar et al., 2021)

Both primary and secondary data are strong in their own way. The choice of this form in research is determined based on the time required, the cost needed, and other factors for collecting data (Mazhar et al., 2021). Primary data can provide relevant and up-to-date data for the research, due to which the current impact of macroeconomic factors, such as inflation, exchange rates, trade policies, and others, can be discussed on the export policies in the Indian agricultural sector. However, primary data collection needs more time compared to secondary data, and it also incurs higher expenses. In some instances, primary data needs a larger number of participants to ensure the authenticity of the research. Considering this, the primary data has been avoided in this research. This is why the *secondary data collection method* has been preferred in this research.

Secondary data has been a cost-effective and time-saving approach, considering which it has been preferred in this project (Taherdoost, 2021). This is because the overall budget and the timeline of the project have been maintained properly. Apart from that, secondary data often provides some major insights into the data, which might have been difficult to obtain from primary data. This is because some confidential information cannot be collected through primary data, which is easily available in multiple sources. Similarly, the effect of socioeconomic factors and policy implementation in engaging producers in the international markets has been measured properly through this method. In this research, the secondary data have been collected from different databases, such as Google Scholar, ResearchGate, ScienceDirect, MDPI, and some government websites in India and international databases relevant to the Indian agricultural industry, from which the agricultural data is available. The government websites have been significant for providing recent data about macroeconomic factors like inflation, exchange rates, and trade policies. Moreover, the articles and journals have provided adequate information about technological innovation, by which financial limitations in the Indian agricultural sector have been mitigated, along with increasing competitiveness. Moreover, the data has been collected after 2020, so that recent information can be gained for understanding the financial conditions that influence global marketing decisions in the Indian agricultural industry.

3.10 Data analysis technique

Data analysis technique is the second most important stage in a research project after the data collection method (Dawadi, Shrestha, and Giri, 2021). In this stage, the collected data is interpreted in a simpler manner, which makes it easier for the readers to understand the

outcomes of the data. Research data can be analysed in two ways: qualitative and quantitative. Qualitative data analysis is the process of analysing textual forms of data, while quantitative analysis involves numerical data for analysis. In this research, *qualitative data analysis* has been performed. This is because, through the secondary data, a textual form of data has been collected, which can be analysed through this technique. Besides, through the qualitative analysis, expressions and experiences are considered, due to which the impact of different aspects on international marketing decisions has been measured properly for understanding the current challenges and opportunities for the companies in the Indian agricultural industry.

The secondary data has been analysed through the thematic analysis technique. There are six different stages in this technique, through which the data has been analysed. At the first stage, the data have been familiarised (Braun and Clarke, 2022). Secondly, the initial codes have been generated for identifying existing patterns in the data. Based on the grouped codes, some themes have been searched for. After that, the themes have been described and named to understand the data segmentation (Braun and Clarke, 2022). Finally, the interpretation of the data has been written, by which the significance has been exerted. This is how the data has been analysed, and the objectives have been met in this research.

3.11 Validity and reliability

Validity of a research project refers to the accuracy of the intent of the research; while reliability is the consistency of the research data, due to which the readers can be confident about the authenticity of the information (Coleman, 2021). In this research, the validity has been ensured through maintaining transferability. In this regard, a thick description of the context has increased the validity of the qualitative data. The reliability of the data has been maintained by ensuring an audit trail. This has been used for conducting documentation of the overall research process. Peer debriefing has also been done here to ensure the reliability of the research project. Triangulation has been a core process in this research for maintaining validity. This is because this strategy has influenced researchers to include information from multiple secondary sources so that a critical viewpoint regarding financial disturbances in the Indian agricultural sector can be pointed out, and its impact can be noted on the international marketing-related decisions in that industry.

3.12 Limitations

This research has certain limitations, due to which the process of maintaining reliability and validity has been difficult. In this regard, the method of data collection can be mentioned. This is because, in this research, only secondary data has been collected, which has limited the scope for understanding the impact of the current fluctuation of financial condition, due to which the international marketing decision has been influenced in the Indian agricultural sector. The inclusion of primary data would have enriched the area of exploring the practical experience of the sector in terms of global marketing decisions. On the other hand, secondary data is also limited in terms of controlling quality. There has been a risk regarding mismatching data with the research questions due to the lack of control over the quality of secondary data. This is concerning for balancing the authentication of the research outcomes. Besides, there is a limitation of comparability in the secondary data. This is because finding proper data depth and content specificity has made it difficult to compare the data from a variety of sources. This is how the overall usefulness of the research has been reduced. In this regard, there is limited access to farmer-level perspectives, due to which their experiences could have been included for understanding the impact of financial constraints on marketing decisions in the Indian agricultural sector. There has been a limitation regarding contextual differences in different regions in India, due to which the authentication of data has been reduced.

3.13 Ethical consideration

Ethical consideration is an important phase of a research project, through which the authenticity is ensured. In this research, several ethical perspectives have been ensured, so that no bias can occur. For instance, the data collected here is recent, and no information published before 2020 has been included. This is how the process of accurate information for understanding the impact of financial crises on international marketing decisions in the Indian agricultural sector has been maintained. Along with this, only government sites, peer-reviewed articles, and journals have been used here for gathering data, so that the data quality can be higher for answering the research questions. Apart from that, the information has been implemented in this research with proper citation, so that the credibility of the author can be maintained. This has helped in avoiding misinterpretation of the information, along with manipulation of the data. On the other hand, after collecting data, it has been stored in a personal device with the help of a pen drive, so that the data cannot be misused. Additionally, the data has been destroyed after the research has been completed.

3.14 Timeline

Activities	Week 1-2	Week 3-5	Week 6-7	Week 8-9	Week 10-11	Week 12-13	Week 14-15
Selecting topic and getting approval from the tutor							
Structuring aim and objectives							
Gathering literature review							
Designing methodology							
Collecting secondary data							
Aanalysing the collected data							
Completing draft of all the chapters							
Final editing and proofreading							
Submitting the project							

Figure 6: Research timeline

(Source: Self-developed)

From the above table, it is evident that the research has been completed within 15 weeks. The division of activities has been presented in the timeline accordingly.

3.15 Chapter summary

After coming through this chapter, it has been summarised that the research onion has been the baseline of the methodology of this project. Interpretivism philosophy, inductive approach, descriptive design, mono method, case study strategy has been selected here. Besides, the secondary data collection method has been chosen here, and qualitative data analysis has been performed along with the thematic analysis technique. In the next chapter, the secondary data will be collected and presented for further analysis. Hence, it can be said that this chapter has been the skeleton of the next chapter.

Chapter 4: Data Analysis

4.1 Chapter Introduction

The chapter examined the influence of macroeconomic factors, policy environment and technological change on international marketing decisions in the Indian organization in the agricultural sector. The chapter utilised secondary qualitative data and employs the thematic analysis to explain the effects of economic volatility on exporters in their entry mode, perception of risks, trust in buyers and the long-term contract behaviour. Instead of outlining economic trends, this chapter looks at how inflation, exchange rate volatility, policy ambiguity and digital transformation impacted the capacity of firms to position themselves in the international market, as well as maintained international relationship.

Through combining reading evidence of peer-reviewed publications and official institutional publications, the analysis found patterns that describe why Indian agricultural exporters use short-term and reactive marketing strategies rather than longer-term development in the market. The results presented an analytical basis on Chapter 5 as it correlates the patterns of the study with the international marketing theory on market entry, relationship marketing, and competitive positioning in the case of uncertainty.

4.2 Overview of Data Sources

The analysis was focused on secondary data sources to ensure the contextual reliability, credibility, and breadth. The data was extracted from peer-reviewed academic journals, reports from companies or international institutions, and government sources relevant to economic policy and trade policy. The sources were posted to her 2022 sources that was selected for economic dynamics and political changes that impact agricultural marketing. These sources provided data focused on sector-specific insights, comparative issues, and policy-oriented insights, which enabled the comprehensive assessment of digital transformation institutions, exchange rate moments, and inflationary pressures. The use of high-quality secondary data empowered the analytical region and align with the inductive and interpretivist research design.

4.3 Data Screening and Organization

S/N	Author	Aim/Purpose	Methodology	Key Findings	Limitations
-----	--------	-------------	-------------	--------------	-------------

	(Year)				
1.	Commerce, (2020)	To analyse and highlight India's strategy for remote to effectively promote agriculture exports for infrastructure development, policy reformation, market diversification, and policy reforms.	Policy-based document analysis for stakeholder consultations, institutional inputs, and export data.	The policy identified price stability. Logistic improvements, value addition, and trade facilitation are critical for exports. Highlighted domestic price pressures, export balance, which constrains long-term export, and impressive, predictable trade policies.	The limitations are imperial evolution for post-policy and producer-level influences.
2.	OECD-FAO (2024)	To analyse country-specific and global market trends with policy impacts and projections for different trade prices.	Using economic modelling for macroeconomic indicators and global commodity data sets.	The report highlighted the effect of great policy uncertainty, exchange rate movements, and inflation on performance within developing economies. This	India's specific insights are aggregated, focusing on regional projections for analysis.

				highlighted the climate today and the cause, which traces the productivity. Innovation and policy stability were crucial parts of the sustainable export competitiveness of India.	
3.	Adjemian, Petroff and Robe, (2022)	To investigate the political economy and impact of export-based dams on commodity price volatility in the agriculture industry of India.	The use of quantitative economic analysis focuses on great policy data and international commodity prices for analysis.	It illustrated the export restrictions regarding price volatility and reduced credibility within the international Market. Provides strong evidence for interventions in policies and responses for inflation and long-term export stability in deposit countries, such as India.	Lacks focus on the global Market rather than country-specific analysis.
4.	Reshi and	To examine the	Analysis of	Findings	Lacks for not

	Sudha, (2023)	connection between economic growth, total performance, and trade liberalisation in India.	secondary data through macroeconomic indicators and factors of national trade.	highlighted the impact of trade openness on economic growth and benefits in different sectors. Industry remains vulnerable due to policy inconsistency, inflationary pressure, and extreme fluctuations. Highlights the effective participation of international markets and the growth of exports.	disaggregating findings at the farm or commodity level of the agriculture industry of India.
5.	Rakholia et al., (2024)	To investigate the option of different technologies for impact on sustainable agriculture in India and their influence on resilience and productivity.	Use of pilot empirical research.	Finding highlighted the use of data-driven decision-making, decision farming, and digital tools to enhance cost reduction, yield stability, and input efficiency. The adoption can	. Lacks broad geography and depends on a small sample size.

				help to constrain infrastructure deficits, capital limitations, and skill gaps, which indicates the rules of technology for two to reduce the economic issues, weigh institutional support, and require policy.	
6.	Lu et al., (2025)	To examine the rural India Digital economic contribution for market integration and industrial revitalisation.	Using quantitative regional analysis along with secondary economic indicators.	Highlighted the role of the platform waste market axis and digital inspector to improve market participation, income diversification, and producer connectivity. This reduced the information asymmetry and transaction cost and provides insights for effective	Lacks context specific to mainly rural China and generalization.

				implications for Indian agriculture producers for active international market access by enabling technology-based value chains.	
7.	OECD, (2025)	To critically analyse the agriculture policy reforms, market outcomes and policy support among different partner countries and members involving India.	Economic data analysis and comparative policy analysis.	This finding highlighted the strong influence of market regulation and income support mechanisms on competitiveness and producer participation. India faced persistent challenges, which involved limited access to international markets, and even subsidy distribution and market fragmentation, where the enforcement	Limited India-specific findings and legs of comparative assessments.

				required innovation, leading to growth and coordination reforms.	
8.	IBEF, (2025)	To investigate the overview of India's current agriculture export performance, global positioning, and product composition.	Use of descriptive analysis for production and national export statistics analysis.	The report highlighted the sustainable growth of processed foods and specific agriculture driven by parents, mainly supported by global demand. Factors such as cell compliances, cost price volatility, and logistics inefficiencies have an impact on medium and small producers of India and limit their ability to engage with international markets.	Limited analytical data and primary descriptive analysis.
9.	Vijayakumar et al., (2025)	To critically identify the	Use of conceptual	Highlighted that the adoption of	This lacks

		impacts of policy interventions for ladies on the adoption of Agriculture 4.0 in India.	analysis of systematic literature review to provide insights.	smart analytics, automation, AI, and IoT helps to improve the competitiveness, cost efficiency, and productivity in the agriculture industry. The infrastructure limitations, digital literacy gaps, and financial constraints hampered adoption and show that technology innovation alone is insufficient without policy alignment.	primary empirical research.
10.	Chen, (2025)	To effectively analyse the role of current modern agriculture technology in enhancing land use and productivity	Use of quantitative modelling for analysis of the performance data set of the agriculture industry.	Finding highlighted the use of modern technology to scan, improve, optimise, and yield efficiency of the land use and reduce environmental	Lack of discussion in trades and export-based outcomes.

		efficiency.		pressure and production cost. Technology could help to improve competitiveness and mitigate economic constraints to provide relevant insights for technology-focused agricultural transformation economics, like in India.	
11.	Dubashi et al., (2023)	To evaluate the role of Agtech innovations in converting and improving formality in Indian agriculture.	Secondary case studies and market data analysis.	Data analytics decisions, inputs, and digital platforms in hand stabilisers, efficiency market axis, and price discovery. Adoption of agtech could improve and help to overcome economic and structural constraints faced	Limitations include only industry focus and a lack of academic validation.

				by farmers.	
12.	Goyal et al., (2025)	To analyse different pathways for competitiveness and value creation for farmers in Indian agriculture.	Use of industry benchmarks and strategic analysis of different sectoral data.	Effective policy reform supplied technology adoption, improving export competitiveness and farmers' income impacts due to economic changes and socioeconomic factors. Addressing issues of cost pressure and scale of efficiencies was crucial for integrated producers for international and domestic markets.	Limitation due to dependency on consulting-based insights or projections.

Table 1: Data screening and organisation

(Source: Self-developed)

4.4. Theme Coding and Development

Theme	Sub-Theme	Description	Citations
T1: Influences of Trade	1. Price Volatility	This theme helped	

Policy and Macroeconomic Conditions on the Performance of the Agricultural Export of India	and Inflationary Pressure 2. Export Competitiveness and Exchange Rate Fluctuations 3. Export Restrictions and Trade Policy Uncertainty	to analyse trade policy and macroeconomic instability, which shaped Indian agricultural export performance. The finding highlighted the inflationary pressure and price bullet for policy responses, which involved export controls and export predictability. In this matter, exchange rate fluctuations mainly impact the export competitiveness, focused on revenue stability and cost structure. We could lose the confidence of customers and discourage long-term investment, which impacts global agriculture policy and the best trade network.	Commerce, (2020) OECD-FAO (2024) Adjemian, Petroff and Robe, (2022) Reshi and Sudha, (2023)
T2: Policy Determinants	1. Economic and	These highlighted	

and Socioeconomic Determinants of Producer Participation within Domestic and International Markets	Socioeconomic Barriers to Market Participation 2. Role of Policy and Institutional Reforms 3. Effective Compliance, Logistics and Market Access Constraints	the policy frameworks' and socioeconomic conditions' impact on producers in international and domestic markets. Evidence highlighted the Shishu economic and economic barriers, such as wasted participation, skill gaps, and unlimited capital for growth. In this matter, institutional and political reforms played a vital role in shaping the market axis and incentives, along with an even implementation of different effectiveness. Their four market access issues, inefficiency and compliances requirements – created or hampered small and medium producers, which face structural inequality.	Rakholia et al., (2024) Lu et al., (2025) OECD, (2025) IBEF, (2025)
--	---	---	--

T3: Technological Innovation as a Crucial Mechanism for Improving Competitiveness and Reducing Economic Constraints	1. Enhancement of Productivity by Using Precision and Digital Technologies 2. Value Creation by Technology Integration in the Market 3. Constraints for the Adoption of Advanced Technology in the Agriculture Industry	These themes helped to analyse the role of cutting-edge technology innovations to improve the agricultural market competitiveness and reverse the economic limitations. The finding also helped to analyse the role of digital technology in all precision agriculture to enhance resource optimisation, efficiency and productivity. Matter Technology given value creation helped to improve the market connectivity and price discoveries, where adoption of technology faced difficult barriers, such as low rate digital literacy gaps in the first structural gaps, and financial	Vijayakumar et al., (2025) Chen, (2025) Dubashi et al., (2023) Goyal et al., (2025)

		limitations for producers to adopt the new eighth technology. However, it heavily depended on supportive institutional and effective policy environments for the implementation of technologies.	
--	--	--	--

Table 2: Thematic coding

(Source: Self-developed)

4.5 Analysis of Themes and Sub-Themes

4.5.1 Theme 1: Influences of Trade Policy and Macroeconomic Conditions on the Performance of India's Agricultural Export

On a global marketing orientation, the theme enlightened on the exporter behaviour change as a result of macroeconomic volatility. The perception of risk had risen with inflationary pressure and instability of the exchange rate, so firms are not willing to sign long-term contract and invest in market structure development. The uncertainty in trade policy also diminished the confidence of buyers, as exporters will shift to short-term, transactional, and not relationship-based approaches to marketing. The above dynamics justified why Indian agricultural exports are usually opportunistic and price based rather than strategically located in the international markets.

Price Volatility and Inflationary Pressure

Although OECD-FAO (2024) focused on inflation as one of the triggers to short-term domestic stabilisation, Adjemian, Petroff and Robe (2022) showed that this type of intervention harms the external credibility. The combination of these studies showed that there is a structural contradiction in that policies that seem to be put in place to control the

internal prices create international marketing risk. This risk meant that exporters will not engage in relationship strategies like long-term contracting and brand building which is the core of the international marketing theory. As a result, the Indian exporters were stuck in the reactive pricing behaviour as opposed to developing stable market positioning in the global value chains.

Export Competitiveness and Exchange Rate Fluctuations

The exchange rate movement was crucial for determining the different export-based competitiveness in agriculture. The exchange would lead to volatility in international markets and directly impact agriculture. Exports by profit margins, input prices and cost structure fluctuations. The volatility mainly increased the revenue uncertainty and hampers the long-term contract between producers (OECD-FAO, 2024).

Figure 14.5. India: Composition of agricultural output growth, 2013-22

Average annual growth

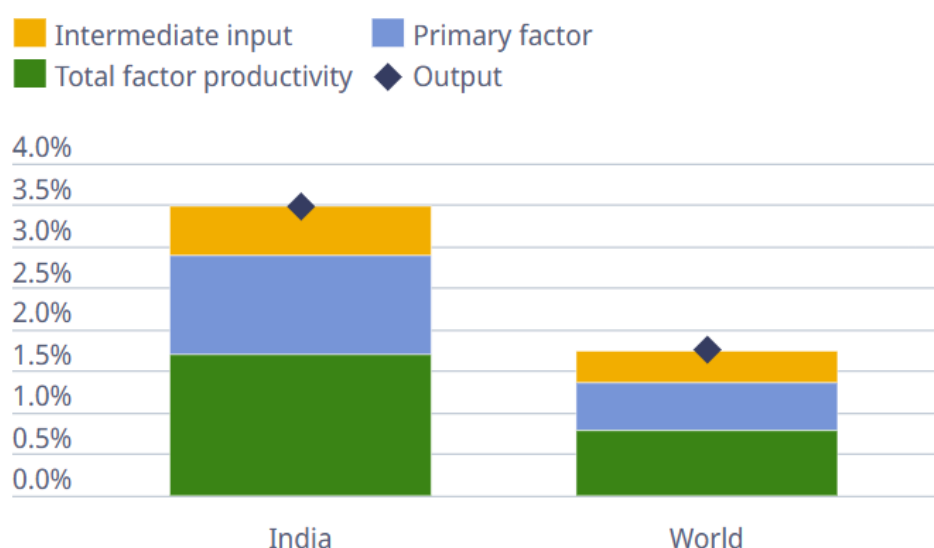


Figure 7: Indian Agriculture Sector

(Source: OECD, 2025)

The above images showed the input and output equation of the Indian Agriculture sector in a broad manner by 2022. The lacks of stable extensive rates mainly reduced the risk appetite and complicate the pricing procedures between the traders and producers (Adjemian, Petroff and Robe, 2022). This worked as the core market entry barriers which impacts of the

agriculture industry for the long-term business and growth. On the other hand, the exchange rate stability was mainly due to policy reforms, which create a high level of market risk (Commerce, 2020). The study also highlighted that in economic instability, constant changes for structural competitiveness can bring stability in the exchange rate, which provided a price advantage for sustainable agriculture-focused export growth in the Indian Market.

Export Restrictions and Trade Policy Uncertainty

The policy unpredictability and export restrictions were the core constraints of the effective export performance of Indian agriculture. The frequent exposure of quotes and bans on the responses for the domestic price was valuable. These constraints are impacting the Indian agriculture industry's reputation as the core reliable supplier (OECD-FAO, 2024). The evidence highlighted the export restriction or impact on the international Market. Signals and amplification of global volatility. In contrast, inconsistent trade policies and contracts were limiting the producers' integration and declining the high level of investment for the creation of global value chains. In contrast, the policy uncertainties were the core structures or infrastructure barriers for Indian agriculture, which undermine the great competitiveness and export confidence for the long term (Adjemian, Petroff and Robe, 2022). Therefore, the repeated dependency on the ad-hoc controlled in India weakens the credibility and discouraged the investment for export-oriented infrastructure in the agriculture industry for farmer producers, which was mainly impacted by economic fluctuations in the international Market (Reshi and Sudha, 2023). The findings also indicated that the limits of willingness, the quality standards, and long-term engagement, which conferred ability values, are even or high-volume-based export agriculture trade.

4.5.2 Theme 2: Policy Determinants and Socioeconomic Determinants of Producer Participation within Domestic and International Markets

Economic and Socioeconomic Barriers to Market Participation

The study highlighted that the social and economic barriers significantly decline the producers' participation in international-level domestic agriculture markets. The limited access for inadequate technical skills, small land holdings, and limited access to capital, or the creation of conferences for producers for different productivity focused practices, and the reduction of market readiness. This uneven access or inequality, and volatility in the income of producers, created this mechanism of proportional access, which impacted the marginal

and small level of farmers and limits the export engagement (OECD, 2025). In contrast, according to Lu et al., 2025 rural infrastructure and weak digital integration were mainly deficits in the exteriorized focus of information acceleration, which happens through the connectivity of the Market and producers. According to IBEF (2024), the export growth of agriculture was hampered by the reinforcement of structural inequality and larger producers of the industry. These were the core market entry barriers for new entry and expansion of the business internationally which impacts by international decisions.

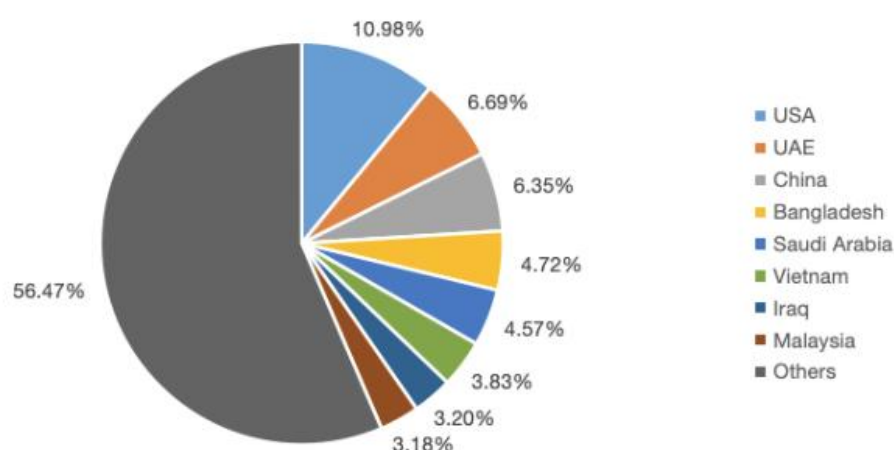


Figure 8: Currently India's Export Networks

(Source: IBEF, 2025)

The above figure showed the current agricultural growth and connections of India with multiple countries, where economic fluctuations can impact the agricultural sector. These findings created socioeconomic vulnerability where the central constraint was limitations of integration or accessibility of producers in the international Market.

Role of Policy and Institutional Reforms

The institutional and policy reforms were crucial for the producers' participation in the international Market, where effectiveness was still uneven. The identified market reforms, institutional coordination, and income support schemes were significant for improving the market integration and producers' incentives (OECD, 2025). The finding highlights that institutional platinum and digital governance frameworks helped to enhance the producers' participation in the reduction of capital or investment or transaction costs and improved the market connections (Rakholia et al., 2024). Despite the benefits, mainly the policy benefitted

are highly impacted by better resources for producers. The finding indicated that policy reforms are the goal, but currently they are insufficient, which requires inclusive implementation at all levels along with high institutional capacity, which improved the broad participation of farmers in the Indian agriculture industry in global markets. Thus, the reformation of the policy and accessibility for participation also were the crucial factors and became the market barriers for the producers which influenced by changes economic shifts and decisions in international markets.

Effective Compliance, Logistics and Market Access Constraints

In the context of the Indian agriculture market, the market access inefficiency and compliances requirements significantly impacted the product participation in high-level export markets. The quality standards, credibility requirements, and certificates burdened a small number of producers and farmers in the agriculture industry. In addition, the inadequate logistics in the first structure mainly increased the cost of transportation, and the losses in the post-harvest environment mainly reduce the export viability (Rakholia et al., 2024). The technological adoption helped to mitigate these challenges, where institutional support and financial empowerment are the core constraints of capability or insufficient integration of technology between the formal Market and producers. Lack of accessibility for technologies are for logistics and market access also created market barriers for Indian Agriculture in International markets. In contrast the platform reduced the access of all the producers, which reduced access to the high-value markets (Lu et al., 2025). These findings highlighted that structural market access is at the core of the barriers. Due to this it directly impacted the production and export participation of Indian producers in agricultural exports.

4.5.3 Theme 3: Technological Innovation as a Crucial Mechanism for Improving Competitiveness and Reducing Economic Constraints

Enhancement of Productivity by Using Precision and Digital Technologies

The finding highlights the digital technology and precision agriculture culture technology's central role in improving the efficiency and productivity of the agriculture industry. According to Chen (2025), the use of Cutting-edge Technology was helpful to enhance the land use efficiency and performance of yield, along with the reduction of production cost and input waste. The data-driven fine farming could help to improve resource allocation and effective management to empower competitiveness in the agriculture industry. In contrast

according to Vijayakumar et al. (2025), the identification or integration of cutting-edge technology such as automation, IoT, and AI was a crucial tool for decision-making and operations in the optimisation of farms. In addition, the productivity games were unequal, which concerns the producers. Therefore, lacked the knowledge about these are the core barriers which influences Indian agriculture industry to enter in the international market. The findings highlighted that technology innovation and integration can improve the productivity potential where competitive benefits heavily relied on complementary institutional support, access, and scalability.

Value Creation by Technology Integration in the Market

The technology integration and production efficiency effectively contributed to improving the market-level value creation in the agriculture industry. The ethical solutions and digital platform enhanced price discovery and market transparency and reduced intermediary dependency (Daubashi et al., 2023).

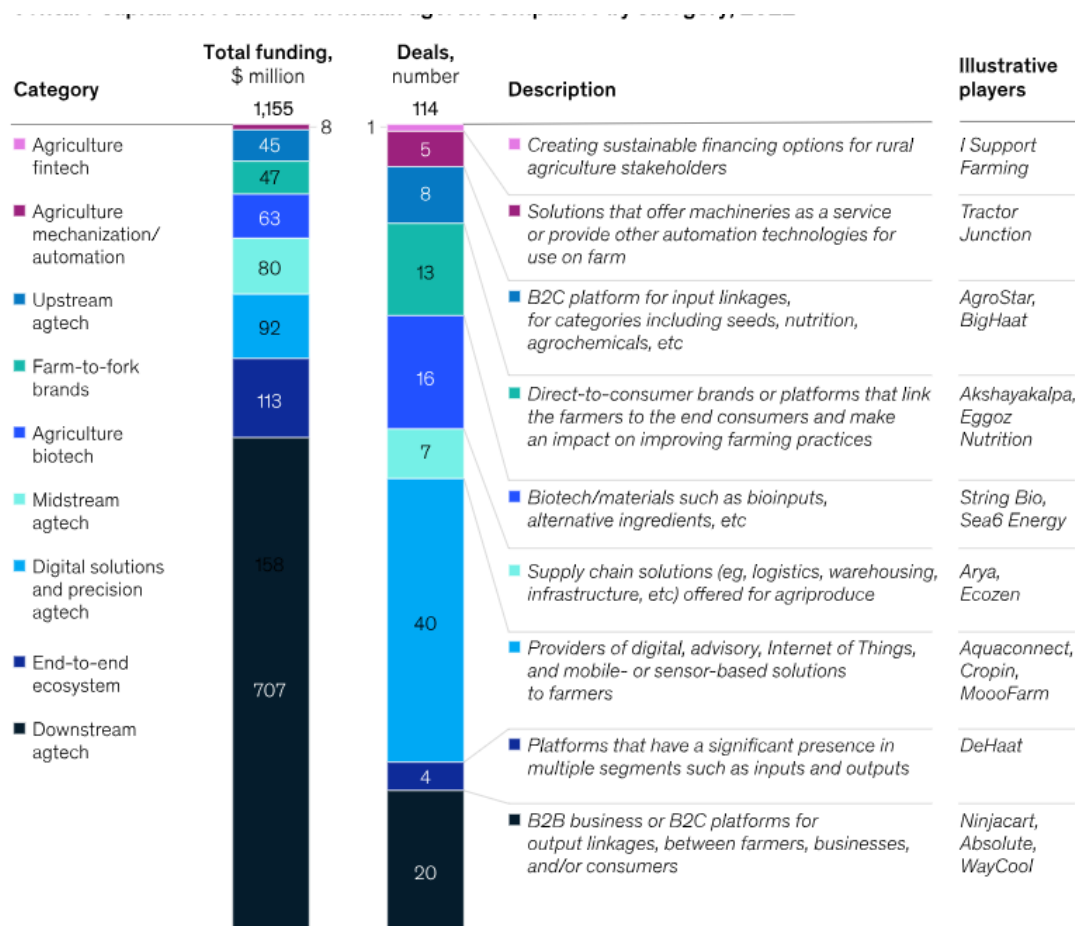


Figure 9: Current Situation for Adoption of Technology in the Indian Agriculture Sector

(Source: Daubashi et al., 2023)

The above figure highlighted the current rate of adoption of technology through Agtech in the Indian agriculture sector, along with core players and funding. Therefore, the integration of different digital technologies and solutions could bring advancements and efficiency in the agricultural Market of India, which is impacted by economic changes. On the other hand, technology implemented for supply chain integration provided access to international and high-level domestic markets, which enhances income realisation (Goyal et al., 2025). Digital technology and smart analytics helped to empower the branding and compliances opportunities in the agriculture market. Indirect support by connection through efficiency games enhanced market responsiveness which also impacted the customers or buyer trust in the international market. Findings also highlighted that technology mainly transforms the agriculture industry to value, even market participation from production-oriented activity only, and also improves competitiveness among food value chains.

Constraints for the Adoption of Advanced Technology in the Agriculture Industry

The adoption of adverse agricultural technology also had significant constraints. The identification of infrastructure deficit, cost and limited digital literacy were the major values for the adoption of the technology. According to Vijayakumar et al. (2025), the technology diffusion was slow and lacked institutional horse skill development support, which created barriers to entering the international Market. The weak financing mechanism and fragmented markets in India restricted the expansion of solubility as for the barriers for branding through the adoption by smallholders in the Indian agriculture industry. In this contrast, Goyal et al. (2025) highlighted that the coordination between technology adoption and policy interventions might hamper the productivity and disparities in income in the agriculture industry. In the context of the agriculture industry, inclusive financing, city, and policy alignment helped to improve the essential relationship of competitiveness for improving potential in the Indian agriculture market in international markets.

4.6 Research Objectives based on Findings

4.6.1 Impact of Macroeconomic Factors on International Marketing Decisions

Based on Research Objective 1, it was found that all the macroeconomic variables were critical and multidimensional in the decisions of international marketing in the Indian agricultural industry. There were some results that suggest that inflation, exchange rate changes, and uncertainty in trade policies were among the major factors that affect the prices of exports, market selection, and strategic planning Panda and Mishra, (2023). All these kinds of macroeconomic conditions were able to provide an atmosphere of instability, making international marketing obligations of agricultural producers and exporters challenging in the long-term Market.

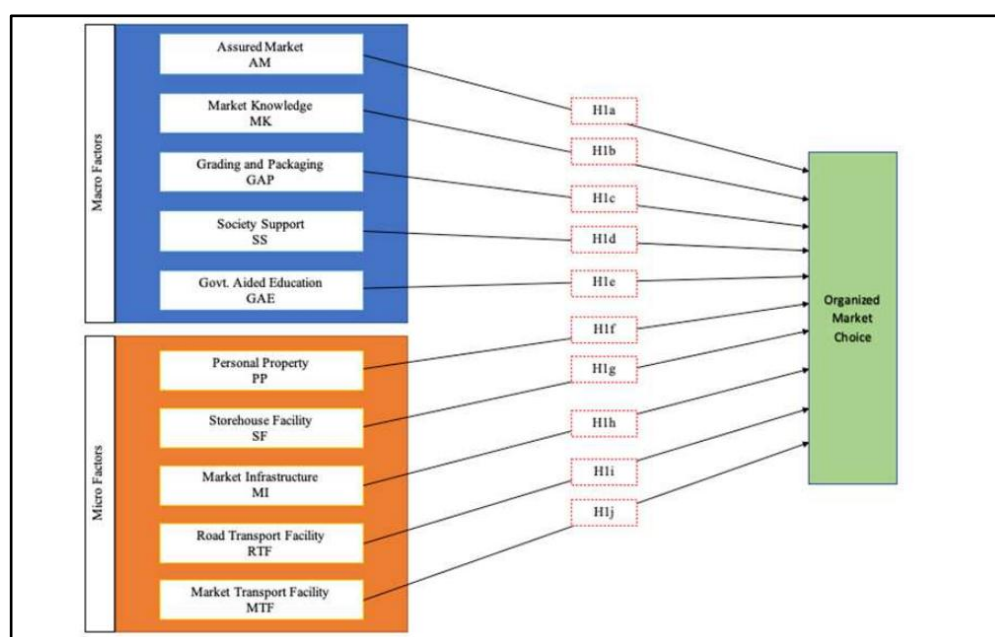


Figure 10: Framework for Organized Market

(Source: Panda and Mishra, 2023)

One of the most effective economic variables that influenced marketing decisions in international marketing were identified as inflation. All the farmers found it very expensive to purchase farm inputs such as fertilizers, seeds, labour, fuel, and transport Sreenu and Rao (2021). It was directly related to the cost of production and will decrease the competitiveness of the producing country or company to produce competitively priced goods in the foreign markets. This had made the exporters usually encounter problems trying to have price stability, which makes India less competitive against other nations, especially when it comes to price-sensitive markets of the world Yoganandham, (2023). All the results had agreed with the problem statement in Chapter 1, which showed the inflationary pressures as a significant limiting element on the export profitability and strategic marketing fit.

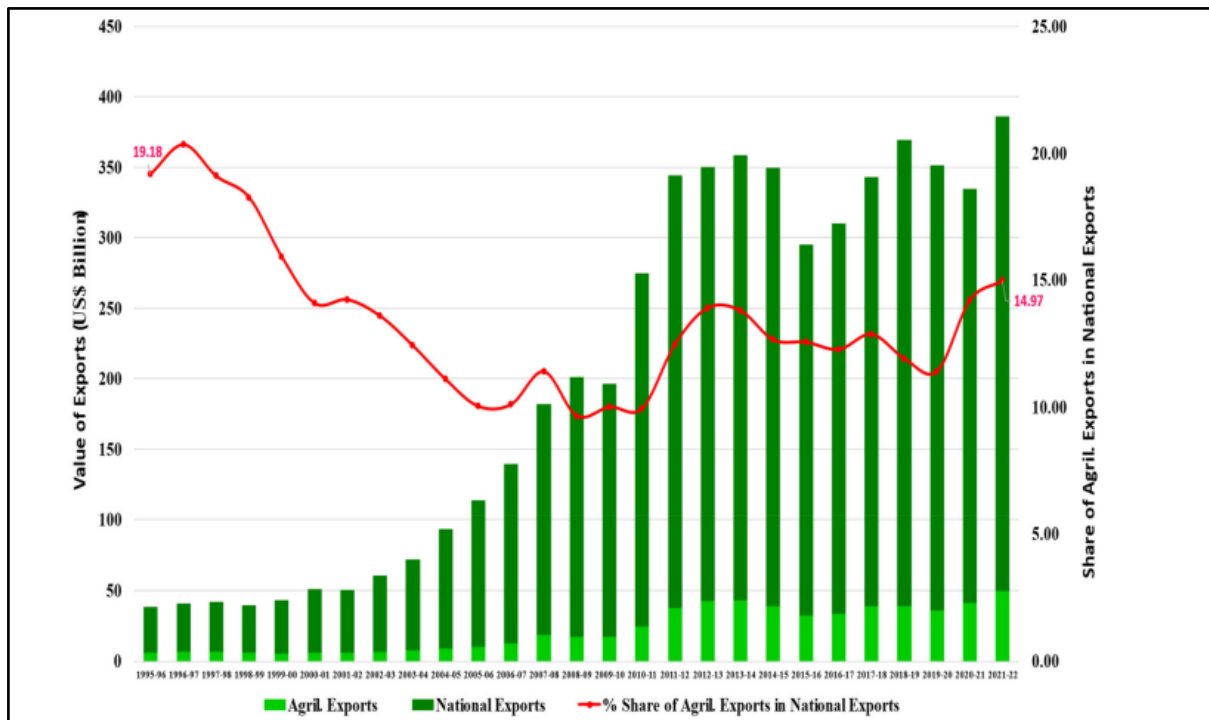


Figure 11: Trends in Agricultural and National Exports from India during post–WTO regime (1995–96 to 2021–2022)

(Source: Ravi Kumar *et al.* 2024)

There was some uncertainty caused by the exchange rate volatility, which also increases international marketing decisions. However, the depreciation of currency could produce a short-term effect of enhancing competitiveness in exports by making agricultural products in India cheaper in the eyes of foreign consumers Ravi Kumar *et al.* (2024). The subsequent uncertain changes added a touch of financial risk to the scenario and made the process of concluding a contract difficult. The results indicated that the exporters mostly implement short-term marketing schemes as compared to long-term market expansion schemes because of the uncertainty in the movement of the currencies Özocakli *et al.* (2024). This inhibited long-term involvement in high-value international markets and upholds reactivity instead of proactivity in marketing behaviour.

Regulatory interventions and trade policies also had a great involvement in the results of international marketing. Unexpected export restrictions, alterations in minimum-support price, tariff fluctuation, and compliance were able to upset the stable trade relations and bring down confidence in buyers. These results indicated that irregular policy frameworks do not promote the use of brands, market building, and long-term relationships by exporters (Gupta

and Mahakud, 2020). It was possible to confirm that macroeconomic instability limited the decision-making process in international marketing by adding uncertainty, decreasing competitiveness, and a lack of strategic flexibility in the Indian agricultural industry.

4.6.2 Influence of Socioeconomic Factors on Producer Participation in International Markets

Considering Research Objective 2, the results indicated that socioeconomic variables are determinants in defining the level at which the producers of Islamic agricultural activities can engage in the international markets. As can be seen in the analysis, income level differences, farm size, education, access to finance, and institutional support were the key factors that determine the measure of export preparedness and marketing capacity.

The size of farms and income level became the two prominent factors of participation in the international Market. Small and marginal farmers who represent a significant percentage of the labour force in India farms seemingly do not have enough money and such quantities of production to satisfy international demand and standards of quality (Gurung and Choubey, 2023). These manufacturers were more prone to economic shocks and have a lower ability to withstand the risks involved in exports. The participation of international marketing moved to the dominance predominantly of larger producers, agribusiness companies, and export-oriented organizations (Ma *et al.* 2024). This result strongly favoured the research problem outlined in Chapter 1 that deals with unequal participation in the global agricultural markets.

Other socioeconomic enablers found to be important in international marketing engagement were education and market awareness. Poor knowledge of international standards, certification, pricing systems, as well as consumer preferences, did not give producers the opportunity to make informed decisions in marketing Methamontri *et al.* 2022). The results implied that the lack of access to market intelligence leads to the reliance on intermediaries, which decreases the bargaining power of producers and their portion in export value. This supported the thesis that the lack of socioeconomic opportunities was among the reasons to created structural inefficiencies in international agricultural marketing Nugroho, (2021).

Based on the credit, cooperatives, and farmer-producer organizations (FPOs) that were found to be key types of institutional support mechanisms to facilitate market participation. Based on some areas where all of these have support, the mechanisms were in place, the producers were more prepared to export, and well-coordinated in marketing Akram *et al.* (2020). All the

results had shown that institutional support was not evenly distributed throughout the regions, and this restricts the overall effect of the same Amitha *et al.* (2021). The socioeconomic barriers thus remained to limit the inclusion in international markets, and specific policy and capacity-building interventions become necessary.

4.6.3 Role of Technological Innovation in Reducing Economic Constraints and Enhancing Competitiveness

The third research aim was to identify how technological innovation can reflect economic limitations and international competitiveness in Indian agriculture. The conclusions indicated that technology is a strategic enabler, but its usage was not spread evenly and may still be limited by structural constraints.

It was demonstrated that digital technologies and information platforms enhance access to information in the international Market, improved price transparency, and facilitated decision-making based on data. These instruments allowed the exporters and organized producers to be more responsive to the fluctuations in the global demand and pricing patterns.

The technological innovation effectively contributed to market competitiveness, video optimization and cost reduction to address the long-term structural inefficiency in the Indian agricultural sector. Based on these findings, it was understood that technologies are important for improving agricultural activities in India. In this regard, supply chain platforms, virtual disability systems and precision farming can be named significantly. The digital tools integrate real-time monitoring of price and qualitative recoveries for demand trends, which helps exporters to adjust the strategies of marketing for more efficiency in global markets (Dubashi et al., 2023). In addition, the technology focus coordination for wellness could help to enhance the reliability, responsibility, and consistency, which are the key drivers of trust in international markets. The analysis also revealed that adoption of technology can be selective rather than systematic for benefits where strong institutions and producers can be connected. The core focus was on effective technology advancements and finance, which helped to gain competitiveness in difficult situations. Therefore, integration of advanced technologies helped to enhance coherent policy promotions in different economic transforming environments in the agriculture industry.

4.6.4 Integrated Analysis Across Research Objectives

The integrity analysis of all objectives highlighted that the technology innovation, macroeconomic conditions, and socioeconomic structures were connected dynamically to receive the international market insights for the Indian agricultural sector. The worldwide macroeconomic stability depended on the stable inflation, exchange rate and policies that help to create strong export planning and confidence in the market. These factors were influenced by different socioeconomic factors, such as the integration of international market trade fluctuations, producers' skills or market participation and active institutional support. The advance technologies were uses different active technologies to prevent the risks and improves the equation access. These helped to improve the productivity and create inclusive or supportive environments to reform policy frameworks. The findings highlighted that addressing different or single dimensions in isolation is still insufficient. Therefore, technology-based market integration, coordinated macroeconomic stability, and dilated socioeconomic reforms were needed to enhance competitiveness and sustainable participation in international or global agriculture markets.

4.7 Summary of Findings

The results indicated that Indian agricultural exporters are compelled to adopt the short-term and reactive marketing behaviour due to macroeconomic instability, specifically inflation, exchange rate volatility and policy uncertainty. These circumstances were detrimental to the trust of buyers and restrict the viability of any long-term contracts and positioning strategies in the market. The socioeconomic differences also constrained the preconditions of entry into the international markets wherein the export activity is concentrated in bigger and more resource-endowed players.

Technological innovation came out as a strategic facilitator with the ability to improve productivity, transparency, and market accessibility. Its advantages were not equal because there are structural and institutional obstacles. The results suggested that Indian agriculture can convey the necessary degree of international competitiveness not just based on economic performance but also on the correspondence of the macroeconomic stability, the exhaustive policy formation, and the marketing potential realized through the support of technology.

4.8 Chapter Summary

The current chapter critically analysed different secondary qualitative data to investigate in which way economic factors were impacting the international market decisions and what the

impact was on the Indian agriculture sector. The thematic analysis of the chapter helped to identify the key patterns of different technological, macroeconomic, and socioeconomic dimensions. On the findings, the highlights were that macroeconomic volatility and policy and. We can see the performance of exports along with socioeconomic constraints that restrict the participation of Indian producers. The 'technology integration' can help to offer different opportunities to improve competitiveness, where effectiveness relies on famous and supportive institutional approaches. From this chapter, a vivid analysis had been presented, through which the discussion had been developed critically along with the findings as theoretical underpinnings.

Chapter 5: Discussion

5.1 Introduction

The previous chapter consisted of data analysis, which demonstrated the research outcome, research question, and research objectives. In the next chapter, findings based on the data analysis were described and summarised thoroughly. On the other hand, the research findings were also compared against the literature review as well. Therefore, this study has provided the relevance and differences based on the existing study as well. This chapter had shown the significance of the study after analysis and having answers to the research questions. In short, this section had described the outcome of different approaches which are aligned with research questions.

5.2 Objective based analysis

Effects of macroeconomic factors like inflation, exchange rates, and trade policies on export policies in agriculture

Different macroeconomic factors, such as inflation, exchange rates, and trade policies on export policies in agriculture, were discussed, which had a significant impact. Due to inflation, it was noticed that the cost of the agricultural materials had increased significantly, which eventually causes a high cost of the final products. The cost of fertilizer, energy, and human resources had also increased in the agricultural sector. Significantly, this inflation was also a reason for low growth or revenue generation in export work. This was also supported by research conducted by Sreenu and Rao (2021), who mentioned that inflation can reduce market competition, which increased complexity in international trade practices. On the other hand, exchange rate change is also a critical factor in global trade activity. This eventually affected long-term trade relationships with the stakeholders, which affected export practices (Özocakli *et al.*, 2024). This also affects economic growth and business relationships, which are not easy to form. Moreover, trade policies played an important role in increasing the trust of the global stakeholders and making investments. But changes in policy and weaker implementation decreased exporters' confidence that affects agricultural development. These factors affect the growth of the agricultural sector in India (R, 2023). This can also limit the export policy, as mentioned by multiple studies. Therefore, this research also supported the fact that multiple macro-economic factors can affect export culture in the agricultural sector, which needs to be controlled.

The influence of socio-economic factors and policy reforms on the involvement of producers in the international markets

The socio-economic factors were also a critical factor in the global agriculture market, which needs to be maintained. India's socio-economic practices like income criteria, education level, and governmental policy affected their motivation in joining international trade practices. This aspect played a significant role in creating producers in the global agriculture sector. In the Indian agricultural industry, small and medium farmers have a significant role. However, this section mostly faced the issue of having enough resources, which is necessary for improving global agricultural exportation. As per the study conducted by Gurung and Choubey (2023), this resource issue among the largest producers of the agricultural sector was a negative factor. However, along with resource issues farmers had multiple vulnerabilities, especially due to inflation which makes the situation more complex (Roy *et al.*, 2022). On the other hand, not having a strong policy to resolve these challenges reduced the number of producers in the global market. Therefore, the global agricultural market was constituted with large agricultural and export-oriented organizations rather than farmers (Ma *et al.*, 2024). Moreover, these issues, including low information on international standards, certification, pricing systems, as well as customer choices, did not give producers the opportunity to make informed decisions in global marketing (Methamontri *et al.* 2022). The Indian government needs to form a policy to mitigate these issues that ensures resources for the inclusion of medium and small-scale farmers and encourages producers more for global export practices.

Technological innovation can help reduce the economic limitations and improve competitiveness.

The technology-based improvement in the agriculture sector was able to enhance the reliability, responsibility, resilience, and consistency. These were the key factors in improving confidence in international markets. In Indian agricultural sector, it was necessary to have technology-based innovation that can ensure more export practices to the global market. The application of digital systems supported making better decisions related to production. Moreover, supply chain activity also got easier by using AI or IoT-based technology. This supported in using lean principle which aligns with reducing waste production. Technology ensured alignment with customers' demands costing, which can improve success in the global market more (Dubashi *et al.*, 2023). On the other hand, uses of

technology were not limited to the operation but also expanded to the production. The genetic engineering process had supported making varieties as per the choices in agricultural production. Different strains into other genes of crops were mixed together by the scientists (Mueller and Flachs, 2021). Such engineering practices were also relevant in decreasing the resistance of the crops to pests, like BT cotton and droughts.

5.3 Key findings

The effect of Macroeconomic factors:

Macroeconomic factors were broad, economy-wide conditions that influence overall economic performance, financial markets, and business operations. These factors were generally beyond the control of individual businesses and can have both positive and negative effects depending on the economic cycle and specific industry.

This involved stabilized domestic prices and export controls in the agricultural industry. The outcome suggested that macroeconomic aspects motivate Indian agriculture market. The study conducted by Adjemian, Petroff, and Robe (2022), described that price issues and export complexity effected international marketing. It was also aligned with OECD-FAO (2024), outcome that mentioned inflation effected export activity. Sreenu and Rao (2021) also described that inflation is cause of price volatility in agricultural products.

influence of socioeconomic factors and policy:

A higher level of education and technical literacy among producers and their workforce encourages rational decision-making, the efficient application of new technologies, and a better understanding of complex international market demands and standards. This factors influenced to the community for their wellbeing and get the access of good health, the source and opportunities for this industry. The policy unpredictability and export restrictions were the core constraints of the effective export performance of Indian agriculture. The frequent exposure of quotes and bans on the responses for the domestic price was valuable. The findings also indicated that the limits of willingness, the quality standards, and long-term engagement, which conferred ability values, are even or high-volume-based export agriculture trade. Policies that support the development of efficient domestic markets provided risk management tools. Research conducted by Gupta and Mahakud (2020), have shown that improper policy implementation effects trade activity which creates barrier in international marketing. Comparatively, another author mentioned that lack of trust and

relationship causes Indian exporters to give more offers which is affecting their business. Additionally, it was also noticed that limited resources among the small and medium scale farmers are not proper in aligning with global agricultural product demands which was affecting their business and international marketing activities (Gurung and Choubey, 2023).

Technological innovation:

Technological innovation reduced economic limitations and boosts competitiveness by increasing productivity and efficiency, such as automation, streamlined processes, which cut costs, creating new markets and revenue streams, and it helped to enhance the product quality and differentiation, and improving agility to meet changing demands, and this allowed businesses to offer better values, expand the market share. New advance digital system helped to get the efficient quality and it allows to be in the good position as a farmer in the agriculture industry. For this, the industry Innovate many new products, method which was useful in the agriculture field and it helped to make the good reputation in the market. Research performed by Vijayakumar et al. (2025) had shown that digital analytical technology increase productivities price. However, contradictory findings noticed that cost benefits were not enough for agricultural export success.

Research conducted by Thakur et al. (2025) described that reducing price of the product can increase profit. But this research identified cost-based approach can affect market position in the international market. Mukaila (2023) described that changes in currency are another issue in achieving competitive market position. This also decreased possibility of having long-term contract. this research was both theoretically and practically fulfilling. This research described the effect of inflation and exchange rate in the context of international marketing. Moreover, this research also analysed different issues in policy that effects Indian agricultural products. On the other hand, policy makers can use the analysis of this research which have identified that having bans creates a negative image. The exporters also need to apply a credible business model rather than relying on cost-based model. Small and medium farmers should use more technology to enhance their visibility.

5.4 Research Limitations and Their Impact on Findings

This research had used secondary qualitative data, which could affect research findings, as it does not include any participants who can describe the real situation in the Indian agricultural sector. But using existing study or data research purposes may affect or direct the research

outcome in a general way rather than giving any new outcome this is a limitation of this study. Another issue was that previous research is based on policy and socio-economic factors. But the impact of innovative technology in the agricultural sector remained underexplored. Moreover, the role of policy on different states of India that have affected agricultural work was also not included. As the study applied a secondary method, it could not analyse farmers' or exporters' opinions, which could have directed this research to new findings. On the other hand, using a qualitative approach reduces its possibility in analysing the inflation rate and income criteria, which can affect producers' exporting practices. This existing research may not always include the gap of policies and socioeconomic factors due to researchers' biases, which can also affect these study findings. However, the rich data on this area helped in giving a proper outcome and analysis opportunity.

5.5 Alignment with Existing Literature

This uneven access or inequality, and volatility in the income of producers, created this mechanism of proportional access, which impacts the marginal and small level of farmers and limits the export engagement (OECD, 2025). The factors of cost of agricultural products gets lower, due to which the demand for those factors of agricultural production, like seeds, was increased, and stakeholders and investors were eager to produce in the agricultural sector with less business risk, and the overall demand and profitability of the agricultural sector tends to be higher (Thakur et al. 2025). And the Technological advancement in the agricultural sector ensured the high productivity of agricultural products and the productive efficiency of agro-based goods (Manogna, Dharmaji, and Sarang, 2025). Four major factors of this theory are- Factor conditions, related and supporting industries, strategy, structure, and rivalry and demand conditions (Afshar and Shah, 2025). This was a positive influence of economic conditions on the agricultural sector. The farmers' living standard had become low. Unemployment increases in the agricultural sector, and agricultural welfare declines (Okezie et al., 2025). An important determinant of agricultural export decisions highlighted in several studies is the exchange rate and export competitiveness, which is the rising cost of cultivation.

5.6 Differences with Existing Literature with this research

Economic conditions like higher revenue, lower costs of inputs, and credit availability for farmers positively impacted the production side of agricultural productivity in India. On the

other hand, some economic conditions, like price volatility of agricultural products, created income uncertainty for producers or farmers and make them less interested in investing in the agricultural sector, which creates a negative impact (Kumar et al., 2025). Agricultural products faced a huge level of marketing competition from other goods, which reduces their demand and sales. So, the farmers' living standard becomes low. Unemployment increased in the agricultural sector, and agricultural welfare declines (Okezie et al., 2025). Comparing the average trade exchange rate and the income from trade from agricultural exports, it clearly showed that there was a positive correlation between the trade exchange rate and income from trade. In the case of agricultural export income, trade positively influences the exchange rate (Abdi, Zaidi, and Karim, 2023). Many scholars documented in their studies that international trade, tariffs, non-tariff barriers, and subsidies have a positive impact on the regional trade of agricultural products (Luckstead, 2024). Institutional support, like counselling of the farmers and proper education of the farmers, prohibited them from using chemical solutions in the agricultural production, which implied a good quality of the agro-based product and generates high demand for those products in the international market (Steinhuebel-Rasheed et al., 2025).

5.7 Surprising Findings

Several recent reports and economic surveys on the agriculture sector highlight a number of surprising and significant findings. In this search, some new information had been found, such as the usage of technologies in the agriculture industry and how helpful it is in that. These were uses for the innovation and to get efficient products. The outcome suggested that ban on any products effects trust of the international market. However, after the ban cancel the exporters had to face with issues in gaining trust. Additionally, traceability of the business organization was limited due to technology insufficiency. It was also identified from the analysis that long-term contracts are difficult to make because of changes in exchange rate. The study also explored that volatile pricing situation reduces the ability to perform a balanced costing tis are limitation in the international marketing activity.

5.8 Mitigating the literature Gap

From the analysis of multiple literature, it was found that the authentic reporting on agricultural marketing does not fully present the actual situation due to a smaller number of studies. On the other hand, farmers' challenges or differences in their productivity based on

factors like region, social groups, or crop choices were not studied. However, this research had tried to mitigate the differences between the existing studies. However, as this research applied a secondary method using the previous research, it was not possible to strengthen the gap with this research. But wide researching and analysis helped in mitigating the gap more or less.

Indian agricultural sector is different in every based on culture, and region. However, this variety was not addressed fully within the research, which was a crucial factor in Indian agriculture. Moreover, this research had played significant role in describing differences among the farmers and its effect on the agriculture. The study used different data sources in mitigating the research gap that can affect international marketing in the agricultural sector. However, the study mitigated the gap by linking macroeconomic factors with international marketing. It described that inflation impact among the exporters in using a cost-based strategy which decreases their competitive position. On the other hand, it had included the role of policy, macroeconomic factors, and socioeconomic implications to give information on the literature gap that is identified in this research. The study had analysed market position which need to be improved by ensuring trust. This study changed the research perspective from production to market position. The research also mitigated policy gap on studies by analysing policy-based approach as well.

5.9 Significance of the Research

This study had been successful in providing a new direction and strengthening data in macroeconomic and socioeconomic factors. Moreover, in this research role technological factors were also included to give broad overview of this on agriculture sector. This study also given theory based analysis which made the research more relevant. As the research used secondary qualitative method it supported in having more information on the international marketing on agricultural sector. However, it lacked quantitative data on different factors like farmers' income level, inflation, which could have strengthened the research findings. The policy-based analysis was relevant based on the Indian perspective. The findings noticed some gaps in policy changes, resource limitations among the small and medium-scale farmers, and several others. However, this gap in the agricultural sector of India can help policymakers in creating a strategy that can mitigate such issues. Moreover, this increases the significance of the research to multiple time. On the other hand, the farmer's situation was also analysed in this research, which made it more important. As in India agriculture played

an important role in economic growth and many rural population does farming for living. But there are economic issues noticed in international marketing. Therefore, researching on this topic can give the government and other stakeholders support in understanding the situation and act accordingly. Therefore, the study was able to highlight macroeconomic, socioeconomic and technological impact on global marketing.

5.10 Conclusion

In this chapter the research findings from the previous section were described in detail. Moreover, analysis was also done in this chapter based on set research objective and research question. However, comparison based on exiting research was conducted to identify its alignment and differences with exiting literatures. This chapter supported in understanding the role of this study in reducing the literature gap. This section supported in understanding the research finding from a different perspective.

References

- Abdi, A.H., Zaidi, M.A.S. and Karim, Z.A., (2023). Economic complexity and bilateral trade flows in selected COMESA and East Asia countries. *Technological and Economic Development of Economy*, 29(3), pp.846-873. doi: <https://doi.org/10.3846/tede.2023.18682>
- Abdullahi, N.M., Huo, X., Zhang, Q. and Bolanle Azeez, A. (2021). Determinants and Potential of Agrifood Trade Using the Stochastic Frontier Gravity Model: Empirical Evidence From Nigeria. *SAGE Open*, 11(4), p.215824402110657. doi:<https://doi.org/10.1177/21582440211065770>.
- Adjemian, M., Petroff, C. and Robe, M.A. (2022). *The political economy of export bans and commodity price volatility: Theory and evidence from agricultural markets*. [online] Available at: <https://www.aeaweb.org/conference/2023/program/paper/RhTdTrny> [Accessed 7 Jan. 2026].
- Afshar, M.Z. and Shah, M.H., (2025). Leveraging Porter's Diamond Model: Public Sector Insights. *The Critical Review of Social Sciences Studies*, 3(2), pp.2255-2271. doi: <https://doi.org/10.59075/kkteax93>
- Akram, N., Akram, M.W. and Hongshu, W., (2020). Study on the socioeconomic factors affecting adoption of agricultural machinery. *Journal of Economics and Sustainable Development*, 11(3), pp.68-80. https://www.researchgate.net/profile/Nida-Akram/publication/339886332_Study_on_the_Socioeconomic_Factors_Affecting_Adoption_of_Agricultural_Machinery/links/5e6a705ba6fdccf321d907bb/Study-on-the-Socioeconomic-Factors-Affecting-Adoption-of-Agricultural-Machinery.pdf
- Al-Ababneh, M.M. (2020). Linking Ontology, Epistemology and Research Methodology. *Science & Philosophy*, 8(1), pp.75–91. doi:<https://doi.org/10.23756/sp.v8i1.500>.
- Alharahsheh, H. and Pius, A. (2020). A Review of Key paradigms: Positivism Vs Interpretivism. *Global Academic Journal of Humanities and Social Sciences*, 2(3), pp.39–43. doi:<https://doi.org/10.36348/gajhss.2020.v02i03.001>.
- Ali Warsame, A. and Hassan Abdi, A., (2023). Towards sustainable crop production in Somalia: Examining the role of environmental pollution and degradation. *Cogent Food & Agriculture*, 9(1), p.2161776. doi: <https://doi.org/10.1080/23311932.2022.2161776>

Amitha, C.D., Savitha, B., Rani, V.S. and Laxminarayana, P., (2021). Factors contributing to the performance of farmer producer organizations (FPOs)-a study in Medak district of Telangana state. *International Journal of Bio-Resource and Stress Management*, 12(3), pp.192-198. <https://doi.org/10.23910/1.2021.2226>

Anderson, K., Corong, E., Strutt, A. and Valenzuela, E., 2023. The relative importance of global agricultural subsidies and tariffs, revisited. *World Trade Review*, 22(3-4), pp.382-394. <https://doi.org/10.1017/S1474745623000101>

Ansari, M.R., Rahim, K., Bhoje, R. and Bhosale, S. (2022). A STUDY ON RESEARCH DESIGN AND ITS TYPES. *IRJET*, [online] 9(7), pp.1132–1135. Available at: https://www.academia.edu/download/92557672/IRJET_V9I7216.pdf [Accessed 15 May 2025].

Birthal, P.S., Srivastava, S.K., Saxena, R., Godara, S., Chand, P., Kishore, P., Jumrani, J., Kandpal, A., Sharma, P. and Pant, D.K., (2025). Indian Agriculture to 2047: Reshaping Policies for Sustainable Development. <https://ageconsearch.umn.edu/record/358871/files/PP50.pdf>

Braun, V. and Clarke, V. (2022). Toward Good Practice in Thematic analysis: Avoiding Common Problems and be(com)ing a Knowing Researcher. *International Journal of Transgender Health*, [online] 24(1), pp.1–6. doi:<https://doi.org/10.1080/26895269.2022.2129597>.

Chauhan, N. and von Wehrden, H., (2025). A critical analysis of the policy potential for sustainable agriculture in India. *Discover Sustainability*, 6(1), pp.1-13. doi: <https://doi.org/10.1007/s43621-025-01032-z>

Chauhan, S., Varma, P. and Singh, S., (2025). Assessment of marketing channel choice and its impacts: the case of paddy smallholders in India. *Journal of International Food & Agribusiness Marketing*, 37(1), pp.197-219. doi: <https://doi.org/10.1080/08974438.2023.2291812>

Chen, X. (2025). The role of modern agricultural technologies in improving agricultural productivity and land use efficiency. *Frontiers in Plant Science*, 16. doi:<https://doi.org/10.3389/fpls.2025.1675657>.

Choi, Y., Acharya, R.N., Devadoss, S. and Regmi, M., (2025). Effects of tariff and non-tariff barriers on India-US agricultural trade. *Applied Economic Perspectives and Policy*, 47(1), pp.256-274. doi: <https://doi.org.10.1002/aepp.13463>

Coleman, P. (2021). *Validity and Reliability within Qualitative Research for the Caring Sciences Journal Item*. [online] *International Journal of Caring Sciences*, pp.2041–2045. Available at: <https://oro.open.ac.uk/81588/1/Coleman%20Validity%20and%20Reliability.pdf>.

Commerce (2020). *Agriculture Export Policy*. [online] Available at: https://www.commerce.gov.in/wp-content/uploads/2020/02/NTESCL636802085403925699_AGRI_EXPORT_POLICY.pdf [Accessed 7 Jan. 2026].

Commerce (2023). *Export Products (Agriculture)*. [online] Mcommerce. Available at: <https://www.commerce.gov.in/about-us/divisions/export-products-division/export-products-agriculture/> [Accessed 24 Nov. 2025].

Dabić, M., Yadav, S., Huck, N., Maley, J.F. and Kiessling, T., (2025). Mitigating the impact of late internationalization of emerging market SMEs: A dynamic capability perspective. *Journal of Small Business Management*, 63(3), pp.985-1021. doi: <https://doi.org/10.1080/00472778.2024.2364793>

Dawadi, S., Shrestha, S. and Giri, R.A. (2021). Mixed-Methods Research: a Discussion on Its Types, Challenges, and Criticisms. *Journal of Practical Studies in Education*, [online] 2(2), pp.25–36. doi:<https://doi.org/10.46809/jpse.v2i2.20>.

Dey, S. and Singh, P.K., (2025). Market participation, market impact and marketing efficiency: an integrated market research on smallholder paddy farmers from Eastern India. *Journal of Agribusiness in Developing and Emerging Economies*, 15(2), pp.311-332. doi: <https://doi.org/10.1108/JADEE-01-2023-0003>

Dubashi, N., Fiocco, D., Goyal, A., Gupta, A., Nathani, N. and Tandon, A. (2023). *How agtech is poised to transform India into a farming powerhouse | McKinsey*. [online] www.mckinsey.com. Available at: <https://www.mckinsey.com/industries/agriculture/our-insights/how-agtech-is-poised-to-transform-india-into-a-farming-powerhouse> [Accessed 7 Jan. 2026].

Findlay, C. and Roelfsema, H., (2025). Rural Transformation, GVCs and the Rise of the Services Economy. *Asia & the Pacific Policy Studies*, 12(2), p.e70018. doi: <https://doi.org/10.1002/app5.70018>

Gamage, A.N.K.K. (2025). Research design, philosophy, and quantitative approaches in scientific research methodology. *Scholars Journal of Engineering and Technology*, 13(02), pp.91–103. doi:<https://doi.org/10.36347/sjet.2025.v13i02.004>.

Ganesha, H.R. and Aithal, P.S. (2022). How to Choose an Appropriate Research Data Collection Method and Method Choice Among Various Research Data Collection Methods and Method Choices During Ph.D. Program in India? *Zenodo (CERN European Organization for Nuclear Research)*, 7(2). doi:<https://doi.org/10.5281/zenodo.7277944>.

Goyal, A., Nathani, N., Pradeep Prabhala and Brennan, T. (2025). *Value creation in Indian agriculture*. [online] McKinsey & Company. Available at: <https://www.mckinsey.com/industries/agriculture/our-insights/value-creation-in-indian-agriculture> [Accessed 7 Jan. 2026].

Goyal, A., Nathani, N., Pradeep Prabhala and Brennan, T. (2025). *Value creation in Indian agriculture*. [online] McKinsey & Company. Available at: <https://www.mckinsey.com/industries/agriculture/our-insights/value-creation-in-indian-agriculture> [Accessed 24 Nov. 2025].

Gupta, G. and Mahakud, J., (2020). The impact of macroeconomic condition on investment-cash flow sensitivity of Indian firms: Do business group affiliation and firm size matter?. *South Asian Journal of Business Studies*, 9(1), pp.19-42. <https://www.emerald.com/insight/content/doi/10.1108/sajbs-06-2018-0073/full/html>

Gurung, R. and Choubey, M., (2023). Determinants of agricultural households to join farmer producer organisations (FPOs) in Northeast India: evidence from Sikkim. *International Journal of Social Economics*, 50(4), pp.465-477. <https://doi.org/10.1108/IJSE-04-2022-0216>

Hansδ, V.B., (2025). Agriculture and Public Policy in India–Recent Trends and Future Directions. https://bostonresearch.org/articles/Agriculture_and_Public_Policy_in_India%E2%80%93Recent_Trends_and_Future_Directions.pdf

Hoq, M.S., Uddin, M.T., Raha, S.K. and Hossain, M.I., (2021). Welfare impact of market participation: the case of rice farmers from wetland ecosystem in Bangladesh. *Environmental Challenges*, 5, p.100292. doi: <https://doi.org/10.1016/j.envc.2021.100292>

IBEF (2024). *Agriculture In India: Agricultural Exports & Food Industry in India* | IBEF. [online] India Brand Equity Foundation. Available at: <https://www.ibef.org/exports/agriculture-and-food-industry-india> [Accessed 24 Nov. 2025].

IBEF (2025). *Agriculture In India: Agricultural Exports & Food Industry in India* | IBEF. [online] India Brand Equity Foundation. Available at: <https://www.ibef.org/exports/agriculture-and-food-industry-india> [Accessed 7 Jan. 2026].

Jacob, T., Raphael, R. and Ajina, V.S. (2022). Impact of Exchange Rate and Inflation on the Export Performance of the Indian Economy: An Empirical Analysis. 3(1). doi:<https://doi.org/10.1177/bsp.2022.3.1.15>.

Jadhav, C.A.D., (2025). *Agricultural Economics: Policies, Markets, and Rural Development*. Academic Guru Publishing House. [https://books.google.com/books?hl=en&lr=&id=zb1qEQAAQBAJ&oi=fnd&pg=PA1&dq=Jadhav,+C.A.D.,+\(2025\).+Agricultural+Economics:+Policies,+Markets,+and+Rural+Development.+Academic+Guru+Publishing+House.&ots=3hZwdXnl12&sig=CFT0SHqzvFXi8_ReYDnPdK3EiBI](https://books.google.com/books?hl=en&lr=&id=zb1qEQAAQBAJ&oi=fnd&pg=PA1&dq=Jadhav,+C.A.D.,+(2025).+Agricultural+Economics:+Policies,+Markets,+and+Rural+Development.+Academic+Guru+Publishing+House.&ots=3hZwdXnl12&sig=CFT0SHqzvFXi8_ReYDnPdK3EiBI)

Kareem, O.I., (2022). Fruit safety regulations in the transatlantic region: how are Africa's exports faring with the regulations?. *Journal of Policy Modeling*, 44(5), pp.886-902. doi: <https://doi.org/10.1016/j.jpolmod.2022.09.001>

Kastratović, R., (2024). The impact of foreign direct investment on agricultural exports: The evidence from developing countries. *The Journal of International Trade & Economic Development*, 33(2), pp.276-293. doi: <https://doi.org/10.1080/09638199.2023.2175306>

Kayani, U.N., Aysan, A.F., Gul, A., Haider, S.A. and Ahmad, S., 2023. Unpacking the asymmetric impact of exchange rate volatility on trade flows: A study of selected developed and developing Asian economies. *Plos one*, 18(10), p.e0291261. <https://doi.org/10.58812/esee.v3i01>

Kumar, J., Rana, S., Rani, V. and Ahuja, A., (2025). What affects organic farming adoption in emerging economies? A missing link in the Indian agriculture sector. *International Journal of Emerging Markets*, 20(5), pp.1849-1868. doi: <https://doi.org/10.1108/IJOEM-03-2023-0390>

Kumar, S. and Ujire, D.K. (2024). Inductive and deductive approaches to qualitative research. *International Journal of Multidisciplinary Educational Research*, 13(1), pp.58–63. doi:<http://ijmer.in.doi./2024/13.1.69>.

Kumar, V., Chandel, K. and Chandel, S., (2025). Economic and Logistical Constraints in Horticultural Supply Chains of Himachal Pradesh: A Qualitative Analysis. *IUP Journal of Supply Chain Management*, 22(1), pp.64-81. doi: <https://doi.org.10.71329/TUPJSCM/2025.22.1.64-81>

Lu, Z., Yang, L., Gou, D. and Wu, Z. (2025). Promotion of rural industrial revitalization through the development of the rural digital economy. *Frontiers in Sustainable Food Systems*, 9. doi:<https://doi.org/10.3389/fsufs.2025.1598461>.

Luckstead, J., (2024). Globalisation and agrifood trade. *European Review of Agricultural Economics*, 51(1), pp.32-53. doi: <https://doi.org/10.1093/erae/jbad038>

Ma, W., Sonobe, T. and Gong, B., (2024). Linking farmers to markets: Barriers, solutions, and policy options. *Economic Analysis and Policy*, 82, pp.1102-1112. <https://doi.org/10.1016/j.eap.2024.05.005>

Mahedi, M., Shaili, S.J., Nurnobi, M., Sakil, A.R. and Rahman, A., (2025). Adoption Of Organic Farming Practices: A Comprehensive Review Of Trends, Determinants, And Challenges. *JOURNAL OF AGRICULTURAL AND RURAL RESEARCH*, 8(1), pp.26-45. https://www.researchgate.net/profile/Md-Mahedi-2/publication/390010333_ADOPTION_OF_ORGANIC_FARMING_PRACTICES_A_COMPREHENSIVE_REVIEW_OF_TRENDS_DETERMINANTS_AND_CHALLENGES/links/67dc28f535f7044c924da766/ADOPTION-OF-ORGANIC-FARMING-PRACTICES-A-COMPREHENSIVE-REVIEW-OF-TRENDS-DETERMINANTS-AND-CHALLENGES.pdf

Manogna, R.L., Dharmaji, V. and Sarang, S., (2025). A novel hybrid neural network-based volatility forecasting of agricultural commodity prices: empirical evidence from India. *Journal of Big Data*, 12(1), p.85. doi: <https://doi.org/10.1186/s40537-025-01131-8>

Mareeh, H., Li, P., Sun, Y., Zhang, R. and Li, A., (2025). Advancing Human Development Assessment in Chinese Cities: A Novel Data Envelopment Analysis-Based Benefit of the Doubt Approach. *Social Indicators Research*, pp.1-45. <https://link.springer.com/article/10.1007/s11205-025-03601-1>

Masood, A., Ahmed, J. and Kareem, F.O., (2025). Exploring Reciprocal and Non-reciprocal Policies of Market Access for SAARC Countries. *Journal of South Asian Development*, 20(1), pp.58-80. doi: <https://doi.org/10.1177/09731741241299602>

Mazhar, S.A., Anjum, R., Anwar, A.I. and Khan, A.A. (2021). Methods of Data Collection: a Fundamental Tool of Research. *Journal of Integrated Community Health*, [online] 10(1), pp.6–10. doi:<https://doi.org/10.24321/2319.9113.202101>.

Mehdaoui, H. and Moufdi, N., (2025). Processus d'internationalisation de la PME et processus d'apprentissage: une analyse à la lumière du modèle Uppsala.-Cas de la région Fès-Meknès. *Revue Internationale des Sciences de Gestion*, 8(2). <https://revue-isg.com/index.php/home/article/download/1981/1541>

Methamontri, Y., Tsusaka, T.W., Zulfiqar, F., Yukongdi, V. and Datta, A., (2022). Factors influencing participation in collective marketing through organic rice farmer groups in northeast Thailand. *Heliyon*, 8(11). <https://doi.org/10.1016/j.heliyon.2022.e11421>

Mphale, O., Gorejena, K.N. and Nojila, O.H. (2024). Understanding IoT Adoption in Botswana's SMEs: A Research Onion Approach. *Journal of Information Systems and Informatics*, [online] 6(4), pp.2374–2396. doi:<https://doi.org/10.51519/journalisi.v6i4.880>.

Mueller, N.G. and Flachs, A. (2021). Domestication, crop breeding, and genetic modification are fundamentally different processes: implications for seed sovereignty and agrobiodiversity. *Agriculture and Human Values*, 39. doi:<https://doi.org/10.1007/s10460-021-10265-3>.

Mukaila, R., (2023). Does the equilibrium real exchange rate improve cocoa export performance?. *SN Business & Economics*, 3(11), p.198. <https://link.springer.com/article/10.1007/s43546-023-00574-6>

Nanda, N., 2022. Global Regime for Agricultural Trade: Is it Benefitting Indian Farmers?. *India's Agriculture and Food Exports*, p.9.

<https://www.nabard.org/hindi/auth/writereaddata/tender/2501231543indias-agriculture-and-food-exports.pdf#page=39>

Nayak, S.H., Srivastava, S.K., Praveen, K.V., Naik, S., Kumar, R.R. and Kumar, A., (2025). Energy Dynamics in Indian Agriculture: Consumption Trends and Economic Impacts. *Environment and Ecology*, 43(2), pp.385-396. doi: <https://doi.org/10.60151/envec/RHHR5300>

Nowfal, S.H., Rani, N.M., Rajassekharan, D., Praneeth, K.R., Dadhabai, S., Ramesh, S. and Bommiseti, R.K., (2025). The Impact of Export-Oriented Agricultural Policies on Farm-Level Income, Production Efficiency, and Market Stability in the Context of Asia. *Research on World Agricultural Economy*, pp.685-701. <https://journals.nasspublishing.com/index.php/rwae/article/download/1537/999>

Nugroho, A.D., (2021). Agricultural market information in developing countries: A literature review. *Agricultural Economics/Zemědělská Ekonomika*, 67(11). <https://doi.org/10.17221/129/2021-AGRICECON>

OECD (2025). *Agricultural Policy Monitoring and Evaluation 2025*. [online] *Agricultural policy monitoring and evaluation*. Organization for Economic Cooperation and Development. doi:<https://doi.org/10.1787/a80ac398-en>.

OECD-FAO (2024). *OECD-FAO Agricultural Outlook 2024-2033*. [online] OECD. Available at: https://www.oecd.org/en/publications/2024/07/oecd-fao-agricultural-outlook-2024-2033_e173f332.html [Accessed 7 Jan. 2026].

Okezie, A., Uchechi, E., Eberechi, E. and Oluchi, E., (2025). Inflation and Agricultural Growth in Nigeria: An Empirical Analysis of Nonlinear Responses to Inflation Changes (1981–2023). *International Journal of Innovative Science and Research Technology*, 10(5), pp.4626-4643. doi: <https://doi.org/10.38124/ijisrt/25may1899>

Özocakli, D., Doğan Başar, B., Ekşi, İ.H. and Ginn, W., (2024). Effect of grain corridor agreement on grain prices. *International Economic Journal*, 38(3), pp.489-506. <https://www.tandfonline.com/doi/abs/10.1080/10168737.2024.2372764>

Panda, R.K. and Mishra, D.N., (2023). Preferred channel choices in vegetable marketing: role of macro and micro environmental factors in Odisha. *Journal of Evolutionary Studies in Business*, 8(2), pp.168-212. <https://www.academia.edu/download/106094604/39664.pdf>

Pathak, H., Joshi, P.K., Lakra, W.S., Singh, A., Baranwal, V.K. and Jain, R.K., (2025). Indian Agriculture by 2047: a roadmap for research, education and extension. <http://111.93.178.142:25000/jspui/bitstream/123456789/2280/1/Indian%20Agriculture%20by%202047.pdf>

Pervin, N. and Mokhtar, M. (2022). The interpretivist research paradigm: a subjective notion of a social context. *International Journal of Academic Research in Progressive Education and Development*, 11(2), pp.419–428. doi:<https://doi.org/10.6007/IJARPED/v11-i2/12938>.

Proudfoot, K. (2022). Inductive/Deductive Hybrid Thematic Analysis in Mixed Methods Research. *Journal of Mixed Methods Research*, [online] 17(3), pp.308–326. doi:<https://doi.org/10.1177/15586898221126816>.

R, S.H. (2023). Patterns, Sources and Determinants of Agricultural Growth in India. *AgEcon Search* (University of Minnesota, USA). [online] doi:<https://doi.org/10.22004/ag.econ.345217>.

Rakholia, R., Tailor, J., Prajapati, M., Shah, M. and Saini, J.R. (2024). Emerging technology adoption for sustainable agriculture in India– a pilot study. *Journal of Agriculture and Food Research*, [online] 17, p.101238. doi:<https://doi.org/10.1016/j.jafr.2024.101238>.

Ravi Kumar, K.N., Naidu, G.M. and Shafiwu, A.B., (2024). Exploring the drivers of Indian agricultural exports: a dynamic panel data approach. *Cogent Economics & Finance*, 12(1), p.2344733. <https://doi.org/10.1080/23322039.2024.2344733>

Ravi, N., Naidu, G.M. and Shafiwu, A.B. (2024). Exploring the drivers of Indian agricultural exports: a dynamic panel data approach. *Cogent economics & finance*, 12(1). doi:<https://doi.org/10.1080/23322039.2024.2344733>.

Reshi, I.A. and Sudha, D.T. (2023). *TRADE AND GROWTH IN INDIA: AN ANALYSIS OF THE RELATIONSHIP AND ITS IMPLICATIONS*. [online] *International Journal of Social Science*. Available at:

<https://pdfs.semanticscholar.org/ff32/05dad0b0740e597b86b551b23ea4543493d5.pdf>

[Accessed 7 Jan. 2026].

Richter, O., Kerres, M., Bedenlier, S. and Bond, M. (2020). *Systematic Reviews in Educational Research Methodology, Perspectives and Application*. [online] Available at: <https://library.oapen.org/bitstream/handle/20.500.12657/23142/1007012.pdf?sequence#page=22>.

Ridley, W., Luckstead, J. and Devadoss, S., (2022). Wine: the punching bag in trade retaliation. *Food Policy*, 109, p.102250. <https://www.sciencedirect.com/science/article/am/pii/S030691922200032X>

Roy, P., Pal, S.C., Chakraborty, R., Chowdhuri, I., Saha, A. and Shit, M. (2022). Climate change and groundwater overdraft impacts on agricultural drought in India: Vulnerability assessment, food security measures and policy recommendation. *Science of The Total Environment*, 849, p.157850. doi:<https://doi.org/10.1016/j.scitotenv.2022.157850>.

Saha, P., Prusty, A.K. and Nanda, C., (2025). An overview of pluralism in agricultural extension and advisory services. *International Research Journal of Multidisciplinary Scope*, 6(1), pp.131-138. doi: <https://doi.org/10.47857/irjms.2025.v06i01.02074>

Saha, S., Sinha, C. and Saha, S. (2023). Agricultural Marketing in India: Challenges, Policies and Politics. *South Asian Journal of Macroeconomics and Public Finance*. doi:<https://doi.org/10.1177/22779787231209169>.

Sahu, P.K., Pani, A. and Santos, G. (2022). Freight Traffic Impacts and Logistics Inefficiencies in India: Policy Interventions and Solution Concepts for Sustainable City Logistics. *Transportation in Developing Economies*, [online] 8(2). doi:<https://doi.org/10.1007/s40890-022-00161-8>.

Sharma, S.K., Gupta, A. and Aggarwal, D., (2025). Reassessing Women's Role, Opportunities, and Challenges in the Unorganized Sector. *Entrepreneurship in India's Unorganized Sector: Challenges and Opportunities*, pp.217-234. https://link.springer.com/chapter/10.1007/978-981-96-4313-4_13

Shillie, P.N., Sangnyuy, M.N. and Mbah, L., (2025). Agricultural marketing innovations in subsistence marketplaces in peri-urban areas of Bamenda, Mezam Division, Cameroon.

Journal of Agribusiness in Developing and Emerging Economies. doi: <https://doi.org/10.1108/JADEE-09-2024-0287>

Sindakis, S. and Showkat, G. (2024). The Digital Revolution in India: Bridging the Gap in Rural Technology Adoption. *Journal of Innovation and Entrepreneurship*, [online] 13(1), pp.1–28. doi:<https://doi.org/10.1186/s13731-024-00380-w>.

Sreenu, N. and Rao, K.S.S., (2021). The macroeconomic variables impact on commodity futures volatility: A study on Indian markets. *Cogent Business & Management*, 8(1), p.1939929. <https://doi.org/10.1080/23311975.2021.1939929>

Steinhuebel-Rasheed, L., Christiaensen, L., Minten, B., Swinnen, J. and Vandercasteelen, J., (2025). Cities and agricultural development. *Annual Review of Resource Economics*, 17. doi: <https://doi.org/10.1146/annurev-resource-101623-104546>

Surendran-Padmaja, S. and Ojha, J.K., (2025). Beyond the number games: Understanding the farmer producer companies in India and the way forward. *Journal of Asian and African Studies*, 60(3), pp.1402-1417. doi: <https://doi.org/10.1177/00219096231192332>

Taherdoost, H. (2021). Data Collection Methods and Tools for Research; A Step-by-Step Guide to Choose Data Collection Technique for Academic and Business Research Projects. *International Journal of Academic Research in Management (IJARM)*, [online] 10(1). Available at: <https://hal.science/hal-03741847v1/file/Data%20Collection%20Methods%20and%20Tools%20for%20Research%200.pdf>.

Thakur, P., Mehta, P., Guleria, A., Divyanshu, Singh, P., Sharma, P., Tiwari, R.K., Lal, M.K. and Kumar, R., (2025). Determinants of farmers' choice for agricultural output marketing channels of tomato (*Solanum lycopersicum*): an empirical evidence from north-western Himalayan region. *Environment, Development and Sustainability*, 27(5), pp.10497-10521. <https://link.springer.com/article/10.1007/s10668-023-04319-1>

Thomas, J., Swamikannu, N., Vijaya Kumari, R. and Padmanabhan, J., (2025). Urban sprawl and farming practices: Examining farm diversification and its intensity in Hyderabad's peri-urban areas. *Agriculture Bioscience*, 6(1), p.0032. doi: <https://doi.org/10.1079/ab.2025.0032>

Tripathi, P.K., Singh, C.K., Singh, R. and Deshmukh, A.K., 2023. A farmer-centric agricultural decision support system for market dynamics in a volatile agricultural supply chain. *Benchmarking: An International Journal*, 30(10), pp.3925-3952. <https://doi.org/10.1108/BIJ-12-2021-0780>

Turnbull, D., Chugh, R. and Luck, J. (2020). Learning management systems: a review of the research methodology literature in Australia and China. *International Journal of Research & Method in Education*, [online] 44(2), pp.1–15. doi:<https://doi.org/10.1080/1743727x.2020.1737002>.

Vasudevan, A., A Arokiasamy, A.R. and Cheng, Q., (2025). Fintech for sustainable agriculture: insights from Tamil Nadu, India. *Frontiers in Sustainable Food Systems*, 9, p.1614553. doi: <https://doi.org/10.3389/fsufs.2025.1614553>

Vijayakumar, S., Murugaiyan, V., Ilakkiya, S., Kumar, V., Sundaram, R.M. and Kumar, R.M. (2025). Opportunities, challenges, and interventions for agriculture 4.0 adoption. *Discover Food*, 5(1). doi:<https://doi.org/10.1007/s44187-025-00576-3>.

Vuvor, C.M., Epifani, S. and Pulina, G., (2025). Exploring opportunities in Africa's dairy production: digital transition as a catalyst for marketing innovation and value chain synergies-a systematic review laying foundations for future research. *Frontiers in Animal Science*, 6, p.1632532. doi: <https://doi.org/10.3389/fanim.2025.1632532>

Yoganandham, G., (2023). IMPACTS OF GLOBALIZATION ON THE WORLD ECONOMY AND THE INDIAN ECONOMY: AN ASSESSMENT. *Int. J. Res. Commer. Manag. Stud*, 5(04), pp.34-43. https://ijmrme.crystalpen.in/uploads/683172fda65d3_713.pdf