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## The trajectory of agriculture in Indian market

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### Abstract

Marketing plays a crucial role in identifying, creating, and delivering value to customers while achieving business objectives. It encompasses market research, product development, branding, advertising, sales, and customer relationship management. Traditional marketing relies on print and broadcast media, whereas digital marketing leverages online platforms, including social media, search engines, and personalized advertising strategies. Agricultural marketing, in particular, is essential for economic development, especially in low-income countries where agriculture is a major source of income and employment. Despite its significance, underinvestment and challenges such as food shortages, climate change, and inadequate infrastructure hinder its efficiency. India, with its vast agricultural potential, contributes significantly to global food production but faces obstacles like market failures and limited financial access. Strengthening agricultural marketing systems through competitive market mechanisms, price transparency, and commercialization policies can enhance farmer incomes and market efficiency. Market orientation in agriculture has evolved from state-regulated policies to market-driven approaches, aligning with neoliberal economic principles. However, smallholder farmers often struggle with deregulation, facing market failures in credit and insurance. Effective governance is necessary to balance public and private sector roles, ensuring investments in infrastructure, research, education, and rural development programs. Public-private partnerships can enhance service delivery, while targeted safety nets protect vulnerable populations. Decentralization and community-driven strategies further improve governance by fostering social cooperation, local decision-making, and policy accountability. Addressing these challenges requires a holistic approach that integrates economic policies, institutional reforms, and governance improvements to promote sustainable agricultural growth and rural development.

**Keywords:** Agricultural marketing, market research, digital marketing

### Introduction

#### Marketing

Marketing involves identifying, creating, and delivering value to customers to satisfy their needs while achieving business goals. It encompasses market research, product development, branding, advertising, sales, and customer relationship management. Understanding consumer behavior and market trends helps businesses design products or services that meet demand. Traditional marketing relies on TV, newspapers, and billboards, whereas digital marketing leverages online platforms such as social media, email, and search engines. Modern strategies include content marketing, influencer marketing, and personalized advertising. The ultimate goal is to attract, engage, and retain customers while building a strong brand presence.

#### Agricultural Marketing

Agricultural marketing plays a vital role in economic development, particularly in low-income countries where agriculture significantly contributes to income and employment. The sector has regained attention due to underinvestment and global crises like food shortages, climate change, and financial instability. India, with 52% of its land under cultivation compared to the global average of 11%, has immense potential to become the world's food basket (Boehlje and Lins, 1998) [3]. It is one of the largest producers of food grains, oilseeds, milk, tea, fruits, vegetables, and sugar. Small farms contribute significantly to grain, fruit, and vegetable production. The sector employs 62.5% of the workforce, generates 14.7% of export earnings, and contributes 18% to GDP.

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Strengthening agriculture is essential for addressing rural poverty, food insecurity, unemployment, and sustainability. Agricultural marketing involves activities such as production planning, harvesting, processing, storage, transportation, packaging, distribution, and sales. An efficient marketing system links farm production with industries and urban markets, ensuring price discovery and stability. It optimizes resource use, increases farm income, expands markets, fosters agro-based industries, and generates employment (Acharya *et al.*, 2006)<sup>[4]</sup>. In India, inadequate rural infrastructure, poor transport and communication, and limited financial access hinder efficient agricultural marketing. Market failures have led to state-run marketing boards and producer cooperatives. Strengthening competitive marketing systems and ensuring transparency in transactions can help farmers secure better returns. The transition toward commercialization requires policies that address market imperfections and consumer demand, shifting focus from production-oriented strategies to market-oriented approaches both nationally and internationally (Ul-Rehman *et al.*, 2012)<sup>[22]</sup>.

### Market Orientation

The field of agricultural marketing has a much longer history than traditional business marketing (Ritson *et al.*, 1997)<sup>[23]</sup>. Emerging in the early twentieth century as a branch of applied agricultural economics, it focused on understanding the dynamics of agricultural commodity markets and the role of government policies in regulating these markets—such as 'marketing orders' in the U.S. and 'marketing boards' in the U.K. By the 1980s, rural development strategies increasingly embraced market-oriented approaches, leading to reduced public interventions in rural economies, in alignment with the neoliberal view that free market mechanisms could eliminate inefficiencies and alleviate poverty.

However, this transition revealed that smallholder farmers struggled to adapt to market-driven systems. The deregulation of agricultural markets left them vulnerable, as private service providers could not fully replace public support due to small market sizes and information gaps. Market failures, especially in credit and insurance sectors, further hindered smallholders from adopting new technologies and reaping their benefits. The shortcomings of both state-driven and market-driven rural development strategies have underscored the need to redefine the roles of government and markets in fostering rural growth.

One key responsibility of the state is to strengthen institutions essential for market efficiency, such as property rights and contract enforcement mechanisms. Additionally, the government must invest in public goods like agricultural R&D, basic education, and rural infrastructure, as private investment in agricultural research remains low in developing countries. Providing education and employment opportunities is also crucial for income diversification in rural areas. While the state may not directly implement all public projects, it must facilitate their provision through incentives and regulatory oversight. Public-private partnerships, wherein the private sector delivers publicly financed services, can enhance efficiency but may also result in high public expenditures (Engel *et al.*, 2008)<sup>[25]</sup>.

Another vital role of the state is implementing targeted safety net programs, such as cash transfers or food-for-work initiatives, to protect vulnerable rural populations from economic shocks (Patle *et al.*, 2020)<sup>[27]</sup>. Furthermore, markets often suffer from inefficiencies due to inadequate infrastructure, poor connectivity, and lack of complementary investments along supply chains. The state can help address these coordination

failures by investing in communication networks, farmer associations, input and credit subsidies, and extension services. Governance plays a critical role in the success of rural development policies. Political and social conflicts can significantly hinder development efforts, making decentralization and community empowerment essential. Local governance structures improve access to information, foster social cooperation, enhance participation in decision-making, and promote accountability among elected officials. Particularly in the diverse rural non-farm sector, decentralization allows for context-specific policy interventions (Lanjouw and Lanjouw, 2001)<sup>[26]</sup>.

This approach has revived interest in community-driven and participatory development strategies. The World Bank has increasingly incorporated these principles into its funding programs (Mansuri and Rao, 2004)<sup>[29]</sup>. However, past challenges—such as elite capture of benefits—remain a concern (Bardhan and Mokherjee, 2016)<sup>[30]</sup>. Community-based safety net programs tend to be more effective when local populations share egalitarian values, but diverse communities often face conflicting interests (Conning and Kevane, 2002)<sup>[31]</sup>. Involving civil society—such as farmer cooperatives and NGOs—can help address market failures and improve service delivery at the local level. These organizations enable smallholders to achieve economies of scale, access credit, and manage shared resources sustainably. Collaborative efforts between such groups and the public sector can lead to efficient service provision, with each entity leveraging its strengths (de Janvry *et al.*, 2002)<sup>[28]</sup>.

Finally, institutions built on social capital—such as group lending schemes, where members share responsibility for loans—can help mitigate credit market failures caused by moral hazard and adverse selection issues.

### Agricultural Policy and Food Security

Turning to global agricultural policies, recent years have seen a concerning rise in protectionism, despite the ongoing WTO Doha Round negotiations, which prioritize the needs of developing nations. High agricultural protectionism in both developed and developing countries has hindered agricultural exports from poorer nations. In response to rising food prices, some governments have implemented additional protectionist measures, such as export bans in Vietnam and India.

### Market-Distorting Policies in Developed Countries

Over the past three decades, global trade has expanded at more than twice the rate of overall GDP growth. The share of developing countries in global trade has increased significantly, shifting from primarily exporting raw commodities to manufacturing goods. In 1990–91, developing nations accounted for 20% of global manufacturing exports; by 2006–07, this figure had risen to 42%. Their agricultural export share also grew from 32% to 41.5% over the same period. Moreover, trade among developing countries has gained importance, with exports from one developing nation to another rising sharply in both manufacturing and agriculture (Aksoy and Ng, 2010)<sup>[24]</sup>.

Despite these gains, many developing nations, particularly the 49 least-developed countries (mostly in Africa), have not improved their market share. The benefits of globalization have largely accrued to middle-income countries, while poorer nations remain reliant on agricultural and resource-based exports. Trade barriers in developed economies have contributed to this stagnation. Although domestic factors—such as weak investment climates, inadequate infrastructure, and poor governance—also play a role, developing country exporters

continue to face restrictions in agricultural, manufacturing, and service sectors. Addressing these trade barriers and fostering a more inclusive global market is essential for sustainable economic integration (Dethier and Effenberger, 2012)<sup>[21]</sup>.

Agricultural marketing also reflects another dimension from supply of produce from rural to rural and rural to urban and from rural to industrial consumers. In the olden days selling of agricultural produce was easy as it was direct between the producer to the consumer either for money or for barter. In brief, it was selling, not marketing. In the modern world it has become challenging with the latest technologies and involvement of middlemen, commission agents who keep their margins and move the product further. As it is well known more the number of mediatory more will be the costs as each transaction incurs expenses and invites profits. Ultimately when it comes to the producer the cost of the produce goes up steeply. In the entire process of marketing the producer gets the lowest price and the ultimate consumer pays the highest as the involvement of more middlemen in the entire distribution process. Effective agricultural marketing ensures that farmers receive fair prices for their produce while consumers get quality products at reasonable rates. Traditional agricultural marketing relied on local mandis (markets), middlemen, and cooperatives, but modern advancements have introduced digital platforms, contract farming, direct-to-consumer (D2C) models, and agribusiness startups. Technologies like e-NAM (Electronic National Agriculture Market), mobile apps, and precision farming tools help farmers access better markets, reduce post-harvest losses, and improve profitability. Government policies, subsidies, and export regulations also play a crucial role in shaping the agricultural marketing landscape.

moving an agricultural product from the farm to the consumer. Numerous interconnected activities are involved in doing this, such as planning production, growing and harvesting, grading, packing, transport, storage, agro- and food processing, distribution advertising and sale. Some definitions would even include "the acts of buying supplies, renting equipment, (and) paying labor", arguing that marketing is everything a business does. Such activities cannot take place without the exchange of information and are often heavily dependent on the availability of suitable finance. Marketing systems are dynamic; they are competitive and involve continuous change and improvement. Businesses that have lower costs, are more efficient, and can deliver quality products, are those that prosper. Those that have high costs, fail to adapt to changes in market demand and provide poorer quality are often forced out of business. Marketing has to be customer-oriented and has to provide the farmer, transporter, trader, processor, etc. with a profit. This requires those involved in marketing chains to understand buyer requirements, both in terms of product and business conditions. In Western countries considerable agricultural marketing support to farmers is often provided. In the USA, for example, the USDA operates the Agricultural Marketing Service. Support to developing countries with agricultural marketing development is carried out by various donor organizations and there is a trend for countries to develop their own Agricultural Marketing or Agribusiness units, often attached to ministries of agriculture. Activities include market information development, marketing extension, training in marketing and infrastructure development. Since the 1990s trends have seen the growing importance of supermarkets and a growing interest in contract farming, both of which impact significantly on the way in which marketing takes place. In India, there are networks of cooperatives at the local, regional, state and national levels that assist in agricultural

marketing. The commodities that are mostly handled are food grains, jute, cotton, sugar, milk and areca nuts. Currently large enterprises, such as cooperative Indian sugar factories, spinning mills, and solvent-extraction plants mostly handle their own marketing operations independently. Medium- and small-sized enterprises, such as rice mills, oil mills, cotton ginning and pressing units, and jute baling units, mostly are affiliated with cooperative marketing societies.

Both developed and developing nations impose significant trade barriers, particularly in agriculture, which hampers agricultural exports from developing countries. In 2004, agricultural policies accounted for 83% of the total welfare cost caused by trade-distorting measures in developing countries. A key concern is the selective protectionism against products crucial to developing nations, especially agricultural commodities. Despite commitments to reduce these barriers, developed nations continue to impose stringent restrictions on imports from developing countries.

High-income nations allocate over \$300 billion annually in domestic agricultural subsidies—three times the amount of aid given to developing countries—while simultaneously restricting or discouraging agricultural exports from these regions. Protective measures such as tariffs and quotas on textile imports have cost developing nations an estimated 27 million jobs. Additionally, other trade barriers further undermine manufacturing and employment in these countries. The agricultural sector in developed countries benefits from an extensive network of protections, including border barriers (tariffs and quotas) and subsidies. These policies are designed to sustain domestic prices but significantly distort international markets, disproportionately harming developing nations. Among OECD countries, border barriers alone account for 70% of agricultural protection.

Furthermore, production-related subsidies, typically provided as direct budget transfers, have a lesser impact on trade distortion. However, agricultural products benefiting from high tariff protection and production subsidies often require export subsidies to remain competitive in global markets. These policies collectively impose an annual cost of \$17 billion on developing nations—five times the total overseas development assistance allocated to agriculture. When exporting agricultural products to OECD countries, developing nations face tariffs at least ten times higher than those applied to intra-OECD trade. The average tariff on agricultural products from developing countries is 16%, compared to just 2.5% for manufactured goods (Anderson and Martin, 2005)<sup>[18]</sup>.

Moreover, OECD countries provide agricultural subsidies that depress global commodity prices, undermining the livelihoods of farmers in developing nations. Although the average support to agricultural producers declined from 37% of gross farm receipts in 1986–1988 to 30% in 2003–2005, the total amount increased from \$242 billion to \$273 billion annually during the same period. The issue lies not in rural development support itself but in the scale and structure of such aid, which artificially lowers prices for goods produced in developing countries.

To mitigate these effects, developed nations have introduced preferential trade schemes aimed at the poorest countries, primarily those classified as least developed. Examples include the European Union's "Everything But Arms" initiative and the U.S. African Growth and Opportunity Act (AGOA). However, these programs have had limited impact. For instance, while the "Everything But Arms" initiative provides duty-free access to exports from least-developed countries, only half of eligible exports receive these benefits. Under AGOA, the most generous



provisions apply to apparel exports from Sub-Saharan Africa, yet 99% of such exports come from just seven nations—only two of which (Madagascar and Malawi) are least-developed. The limited effectiveness of these initiatives stems from complex rules of origin, administrative hurdles, and the weak trade capacity of developing countries. Additionally, most of the world's poor live outside Africa and the least-developed countries, meaning preferential market access largely excludes a significant portion of the global poor and may even disadvantage them through trade diversion.

A more open global trade system would be far more beneficial. Eliminating trade barriers would generate substantial economic gains, particularly for the world's poor. Removing all trade restrictions could reduce global poverty by 3% (Anderson *et al.*, 2011)<sup>[19]</sup>. The most significant benefits from trade liberalization would come from the agricultural sector—not only in OECD countries but also in developing nations, where tariff barriers are often as high or even higher than those in developed countries. However, unlike OECD nations, developing countries provide far fewer production-related subsidies. Reducing agricultural protection—especially trade-distorting tariffs, quotas, export subsidies, and tariff escalation—remains a crucial step for global development.

While not all developing nations would benefit immediately from agricultural trade liberalization, the overall impact would be positive. Higher agricultural prices resulting from reduced trade distortions could initially strain the balance of payments for low-income, net food-importing nations. However, when excluding oil-exporting countries and those facing temporary deficits due to conflict, only 14 low-income countries qualify as net food importers. Among them, Bangladesh, North Korea, and Pakistan account for 80% of net food imports. The remaining 11 countries have a total deficit of just \$565 million—a relatively small portion of their trade. Over time, even these nations stand to gain from price increases, as their exports are also predominantly agricultural. Additionally, they would benefit from broader trade liberalization initiatives. Nevertheless, the international community must support these countries in adapting to and capitalizing on new trade opportunities.

### **Food Security, the Food Price Crisis, and Its Consequences**

Food security extends beyond ensuring sufficient food supply; it also encompasses nutritional adequacy to prevent malnutrition and health issues (Barrett, 2002)<sup>[20]</sup>. While national-level shocks can threaten entire populations, food insecurity often results from household-level economic shocks. In the 1960s and 1970s, discussions on food security—such as the 1974 World Food Conference—centered on production shortfalls and volatility. Today, the focus has shifted to food access. Even when food is abundantly available, the poor and vulnerable often struggle to afford it. Amartya Sen (1981) was the first to highlight that food insecurity arises more from economic constraints than from supply shortages. Limited purchasing power, often due to income shocks, remains a critical barrier to food access.

Currently, the global food security crisis is primarily an access issue rather than a supply shortage: “The world has more than enough food to feed everyone, yet more than 1 billion people remain food insecure.” Despite temporary supply shocks that have contributed to food price spikes, the fundamental problem is affordability for low-income populations in developing countries. Food prices peaked in mid-2008 after years of steady increases, reaching a 30-year high. In addition to elevated price levels, price volatility also surged (Headey and Fan, 2008)<sup>[6]</sup>. Food prices declined temporarily but began rising again in mid-

2010, hitting record highs in early 2011.

For the poor, food prices are crucial since they spend approximately three-quarters of their income on staple foods. Rising prices can severely impact household food security. Ivanic and Martin (2008)<sup>[14]</sup> estimated that the 2007–2008 crisis pushed an additional 105 million people into poverty, reversing seven years of progress in poverty reduction. In Sub-Saharan Africa, poverty increased by 2.5 percentage points due to the crisis (Zaman and Wodon, 2008)<sup>[15]</sup>. Even short-term income shocks from food price surges have long-term effects on household welfare. Households coping with rising food costs often reduce calorie intake, sell assets such as livestock, or cut spending on children's education—decisions that have lasting negative consequences. Lower labor productivity and reduced investment in human capital can trap families in chronic poverty even after food prices stabilize.

Understanding the causes of food price volatility is essential for mitigating future crises. Research indicates that several factors have contributed to recent price surges:

1. Rising fuel prices, which increase agricultural production costs by driving up the prices of fertilizers and other inputs.
2. Depreciation of the U.S. dollar, making dollar-denominated commodities more expensive.
3. Changing dietary habits, particularly in China and India, leading to greater demand for meat and animal feed.
4. Increased biofuel production in the U.S., EU, and Brazil, which has diverted cropland from food production.
5. Climate-related shocks, such as droughts in major grain-producing regions like Australia and Russia.
6. Speculative trading in agricultural commodity markets, which may have amplified price fluctuations.

An additional factor exacerbating food price spikes is the decline in global food reserves. By 2007, the stock-to-use ratio for grains and oilseeds had reached its lowest level since 1970. In the absence of adequate reserves, supply shocks have a more pronounced impact on prices. Although past food price spikes have been rare, forecasts suggest that prices may remain elevated compared to early 2000s levels.

Ultimately, stable agricultural production is essential—not just for ensuring food availability but also for enabling vulnerable households in developing nations to access food at affordable prices.

### **Market and Infrastructure Development**

The Model APMC Act, introduced by the Government of India, encourages direct marketing to help farmers secure better prices for their produce while fostering collaborations with banks, financial institutions, and logistics companies to reduce financing and marketing costs. This initiative aims to attract private investment in marketing infrastructure, boost competition, and enhance services for farmers.

In India, ICRISAT's Hybrid Parents Research Consortium brings together 34 small and medium-sized domestic firms to commercialize sorghum, millet, and pigeonpea hybrids, strengthening both local seed companies and the overall seed market. Direct marketing initiatives like ITC e-Choupal and the National Dairy Development Board's public-private partnership model provide viable solutions for small farmers. Replicating these models can support financial risk management and introduce effective agricultural insurance.

Several studies highlight the potential of Public-Private Partnerships (PPPs) in research, extension, and marketing. Conducting a needs assessment ensures that technology is

effectively implemented at the field level, and strong coordination among partners is essential for achieving targeted goals. In knowledge management-focused PPPs, including copyright provisions in Memorandums of Understanding (MoUs) for products, technologies, and information can help prevent intellectual property theft. Additionally, continuous monitoring of research planning and execution can accelerate technological advancements.

Implementing extension reforms through PPPs can enhance outreach, though immediate results may be challenging, as changing farmers' perspectives on participation, adoption, and acceptance takes time. To ensure long-term impact, PPP partners should maintain sustained engagement with target groups until objectives are fully met. Institutions must actively share knowledge, technology, and resources, as PPPs operate on a mutually beneficial framework.

### Agricultural Marketing in India

Extensive research has analyzed the functioning and performance of agricultural marketing in India. Johnston and Mellor (1961)<sup>[16]</sup> stated that rising incomes, population growth, urbanization, and trade liberalization increase commercial demand for agricultural produce, while improvements in production, post-harvest processing, and distribution enhance marketed supply. Reardon and Barrett (2000)<sup>[17]</sup> observed that market reforms lead to price increases, stimulating higher production, particularly in export crops, and fostering agro-industrialization, supermarket chains, and cooperatives.

Rural de-institutionalization led to the emergence of private and cooperative agrarian institutions as key elements of rural development. Grosh (1994)<sup>[8]</sup> emphasized that contractual arrangements with processors, exporters, and retailers, often through farmer groups, help address market imperfections that hindered macroeconomic and sectoral reforms. Royce (2004) noted that while state agencies still dominate input supply and output purchases, cooperatives now experience greater farmer participation in decision-making.

Ramkishan (2004)<sup>[9]</sup> pointed out that inadequate food processing and storage deprive farmers of fair prices during peak seasons and lead to higher consumer prices in lean periods. Godara (2006)<sup>[10]</sup> argued that economic liberalization has reduced structural rigidities, integrating Indian agriculture with global markets. Farmers must now produce high-quality goods to meet international standards.

Kashyap and Raut (2005)<sup>[11]</sup> suggested that innovative solutions like e-marketing can address rural distribution, promotion, and communication challenges. Its "anytime-anywhere" advantage enables efficient price discovery, lowers transaction costs, and fosters transparency. Efficient supply chains using advanced techniques can add value to food production while ensuring better returns for farmers. Stressed that modernizing post-harvest processing and infrastructure could significantly reduce losses and support food security.

Cooperatives in India's rural economy, enhances business turnover and improves member welfare. Reardon *et al.* (2003)<sup>[7]</sup> documented the growing dominance of private firms in agricultural advancements, particularly in China, India, and South Africa. Tripathi and Prasad (2009)<sup>[12]</sup> reported that Indian agriculture has progressed not only in output and yield but also through structural transformations. Pathak (2009)<sup>[13]</sup> stated that agricultural growth contributes to national development by supplying essential goods to domestic and international markets.

### Classification of Marketing

The study of marketing extends beyond individual business strategies to include broader economic and societal impacts. Micro-marketing, focuses on activities performed by individual organizations, and macro-marketing, is a social process influencing economic development. An effective macro-marketing system is essential for economic progress, particularly in developing nations. Simply improving individual marketing efforts does not guarantee overall societal well-being, necessitating a more holistic approach.

Further classified marketing into positive theory, which explains existing marketing practices, and normative models, which establish objectives for optimal management. Based on this, they proposed four key marketing categories:

1. **Micro-Normative:** Focuses on how firms should conduct marketing for optimal outcomes, including pricing, promotion, product, and distribution strategies.
2. **Micro-Positive:** Explains how and why firms manage marketing processes as they do.
3. **Macro-Normative:** Examines how the broader marketing system should function to serve societal interests.
4. **Macro-Positive:** Analyzes the overall functioning of the marketing mechanism.

This classification highlights the growing intersection between marketing and economics. It also provides a framework for understanding agricultural and food marketing, encompassing areas such as consumer behavior, farmer marketing strategies, government initiatives, price analysis, and policies affecting agricultural markets.

### Marketing Systems in India

India has a long-standing tradition of periodic markets, particularly in rural areas, where small and marginal farmers sell their produce and purchase inputs. These Rural Primary Markets (RPMs) include Haats, Shandies, Mandis, Painths, and Fairs, with an estimated 20,000 to 45,000 such markets operating across the country. Various traditional methods of sale prevail in these markets:

1. **Hatha System:** A longstanding method where prices are negotiated between the buyer and the commission agent using coded signals.
2. **Private Negotiations:** Buyers visit commission agents' shops at their convenience, inspect samples, and negotiate prices. In villages, direct negotiations between farmers and buyers also occur.
3. **Quotations on Sample:** The commission agent presents a sample to potential buyers, who bid, and the highest offer secures the produce.
4. **Dara Sale Method:** The produce is mixed and sold in bulk as a single lot.
5. **Moghum Sale Method:** Transactions occur verbally without a pre-set price, with buyers gathering at a commission agent's shop to bid on the produce.
6. **Closed Tender System:** Buyers inspect the produce displayed at a commission agent's shop and submit price offers in sealed slips. The highest bidder is then informed and sold the produce.
7. **Jalap Sale:** Traders buy standing crops at lower prices, allowing farmers to earn without further risk or expenses.
8. **State Trading:** The government procures agricultural produce at fixed prices to ensure fair returns for farmers and facilitate centralized distribution.

The cooperative movement in India emerged to address common needs, enabling producers, consumers, workers, borrowers, and suppliers to achieve collective benefits through joint efforts and investment. The primary goal of cooperatives is the welfare of their members, who share both profits and losses based on service utilization. In India, cooperative marketing was introduced to help farmers secure better prices for their produce. The Reserve Bank of India (RBI) defines a cooperative marketing society as an association of cultivators formed to market produce more profitably than through private trade. The National Agricultural Cooperative Marketing Federation of India (NAFED), established in 1958, promotes cooperative marketing by directly procuring agricultural produce from farmers, eliminating middlemen.

Cooperative coordination in India has evolved across three key areas: commodity and industry development, supply chain integration with technology, and regulation and promotion of cooperative models. Successful cooperative models include Anand Pattern Cooperatives (APC), which significantly contributed to India's dairy industry growth; Chicory Contract Farming, initiated in 1956 in Jamnagar, Gujarat; and the Kerala Horticulture Development Program (KHDP), benefiting 41,000 fruit and vegetable farmers through 1,886 Self-Help Groups (SHGs). The Maharashtra Grape Growers Association (MRDBS) is another successful farmer cooperative, while the Small Farmers Agriculture Consortium (SFAC), established in 1994-95, provides forward and backward linkages to farmers.

Private-sector participation in cooperative marketing includes initiatives like Cargill India, which offers assured marketing outlets while eliminating fees, commissions, and brokerage. Public-private partnerships have also played a role, such as the collaboration between the Khadi Gramodyog Board (Madhya Pradesh) and Hindustan Lever Limited to launch the "Vindhya Valley" brand, promoting rural products. Warna Bazaar, a milk cooperative society in Maharashtra, has expanded into retail, operating over 40 departmental stores since 1978.

State-led initiatives have significantly shaped agricultural marketing in India. Marketing Boards were initially set up to provide guaranteed markets and storage facilities but have declined since 1980 due to inefficiency and sluggish price discovery. NABARD (National Bank for Agriculture and Rural Development), established by the Indian Parliament Act, 61 of 1981, has been operational since 1982, serving as the apex financial body for agriculture and rural development. The Agriculture Produce Marketing Act (APMA) allows farmers to sell their produce directly to processors, bypassing intermediaries. Regulated markets are spread across the country, with 53% located in Andhra Pradesh, Madhya Pradesh, Bihar, Maharashtra, Uttar Pradesh, and West Bengal, while Punjab and Haryana account for 9.5% of the total. NGOs like BAIF (1967), PRADAN (1987), and AFPRO (1966) have also contributed to agricultural development.

As Indian agriculture moves into the 21st century, it must transition from a supply-driven model to a demand-driven system, aligning production with consumer, processor, and manufacturer preferences. Improved market access and better price information can drive this transformation, ensuring a more efficient and market-oriented agricultural sector.

Market information plays a vital role in the agricultural marketing system by supporting decision-making, regulating market competition, and streamlining marketing processes. It enhances the efficiency of the marketing system and contributes to better price formation. For farmers, access to market information is essential in determining what to cultivate, when

to harvest, where to sell their produce, and whether to store it. Reliable market data also helps traders efficiently transport goods from surplus to deficit areas and assess the feasibility of storage where technically viable (Amrutha, 2009)<sup>[5]</sup>.

### Challenges faced

Agricultural marketing in India is heavily influenced by government intervention, which has evolved significantly over time. While initially aimed at addressing market failures, particularly after the Bengal Famine, excessive state control in the current scenario of agricultural surpluses has led to new challenges. Over the past fifty years, agricultural marketing has transformed due to factors such as increased marketable surplus, urbanization, rising incomes, changing consumer demand, global market linkages, and shifts in government policies. However, several key challenges persist, including the rapid expansion of the agricultural market without a corresponding improvement in the marketing system. Private trade, which handles 80% of the marketed surplus, lacks investment in infrastructure due to excessive regulation and the dominance of the unorganized sector. The demand for value-added services and geographic market expansion is constrained by inadequate rural infrastructure, and direct farmer-to-consumer marketing remains minimal, with 85% of the 27,294 rural periodic markets lacking proper trading facilities. Although 7,161 market yards and sub-yards have been developed, they remain poorly equipped. The food processing industry holds great potential for income and employment growth, but value addition to food production is limited to just 7% due to complex food-related regulations. Inefficient handling at the farm and village levels results in significant losses—7% of grains, 30% of fruits and vegetables, and 10% of seed species never reach the market. Poor marketing infrastructure and excessive controls lead to an estimated annual loss of ₹50,000 crore in the supply chain. Additionally, State Agricultural Produce Markets Regulation (APMR) laws restrict contract farming, which otherwise holds great potential, while farmers shifting to higher-value crops face increased risks related to yield fluctuations, price instability, and income volatility. Although agricultural price policies and support mechanisms have driven technological adoption and improved food accessibility, they have also stifled private sector participation and created economic inefficiencies. Addressing these challenges requires comprehensive reforms in agricultural marketing, infrastructure development, and policy frameworks to create a more efficient and competitive system.

Agricultural marketing in India faces numerous challenges that hinder its efficiency and effectiveness. Limited access to market information, low literacy levels among farmers, and multiple distribution channels significantly impact both farmers' earnings and consumer prices. Government funding for farmers remains inadequate, forcing many small-scale farmers to rely on local money lenders who charge exorbitant interest rates, further deepening their financial distress. The benefits intended for farmers are often eroded by intermediaries who exploit the system. Despite technological advancements, rural areas have yet to fully benefit, as modern agricultural innovations remain largely confined to urban regions.

Moreover, existing legislation has several loopholes, and the absence of a well-organized and regulated marketing system poses additional challenges. Farmers encounter numerous hardships in securing fair prices for their produce, as agricultural marketing involves inherent risks such as perishability, seasonality, and fluctuating demand and supply. These factors are interdependent and collectively impact agricultural



marketing dynamics.

Agriculture remains a crucial sector in India, directly or indirectly supporting the livelihood of a majority of the population. The country has witnessed structural transformations in agriculture and allied activities, reinforcing its role as a key driver of economic development. The integration of agriculture with efficient backward and forward linkages has led to globally competitive production systems in terms of cost and quality. Cooperatives play a significant role in product differentiation at the farm level and in integrating value-added processing activities.

To enhance efficiency and sustainability, Indian agriculture requires better management practices, infrastructural improvements, and policy reforms. Addressing issues such as fiscal and political instability, rising domestic food demand, natural calamities, shrinking land holdings, lack of physical communication, and inadequate institutional markets is crucial. Additionally, challenges such as limited media coverage, lack of professionalism in agricultural management, inadequate agricultural education, and insufficient technical training need urgent attention. The present study aims to analyze the past and present scenarios of agricultural marketing in India, explore its challenges, and provide future recommendations. Effectively leveraging opportunities in agricultural marketing can lead to a more robust and equitable system that benefits all stakeholders (Ul Rehman *et al.*, 2012)<sup>[22]</sup>.

## Priority Areas in Agricultural Marketing and Policy Reforms in India

### Regulation of Agricultural Produce Markets

The regulation of agricultural produce markets in India began in the 1950s and 1960s to enhance the marketing system for farm products. Following a Model Act circulated by the central government, 27 states enacted Agricultural Produce Market Regulation (APMR) legislation, covering 7,161 markets—over 98% of the country's wholesale markets. Studies (Acharya, 2002)<sup>[1]</sup> highlight the benefits of regulated markets, including transparent price discovery, standardized weighing and charges, cash payments without undue deductions, dispute resolution mechanisms, structured auction processes, and reduced physical losses of produce. However, with evolving market conditions, the relevance of these regulations has declined.

A comprehensive review of the agricultural marketing system over the past fifty years (Acharya, 2004)<sup>[2]</sup> reveals several challenges:

- **High Marketing Costs:** APMCs restrict traders from purchasing directly from farmers outside designated market yards, inflating marketing expenses.
- **Limited Market Access:** The average area served per market yard is 459 sq. km., with even larger coverage in states like Assam, Himachal Pradesh, Odisha, Madhya Pradesh, and Rajasthan. Long travel distances discourage small farmers with limited surplus from accessing markets.
- **Inadequate Infrastructure:** While 27,294 rural periodic markets serve as key points of contact between small farmers and the market, 85% remain underdeveloped, limiting rural market integration.
- **Bureaucratic and Inefficient Management:** Many APMCs lack regular elections, leading to government-appointed bureaucratic control. Staff prioritize fee collection and construction activities over market development.
- **Market Congestion and Malpractices:** Delays in produce disposal frustrate farmers, while traders often engage in unethical practices such as late payments, deductions, and

refusal to issue sale slips. Cartelization of market functionaries creates entry barriers for new traders.

- **Misuse of Market Fees:** APMCs operate as government-backed monopolies, with market fees often diverted for revenue generation rather than reinvested into market infrastructure.

To address these issues, the Inter-Ministerial Task Force proposed a revised Model Act to improve marketing efficiency and attract private investment. However, adoption has been slow due to resistance from state governments and trader groups fearing loss of revenue and market dominance. Potential solutions include:

- Ensuring APMCs receive market fees even under contract farming models.
- Establishing additional sub-yards under cooperative or private management.
- Allowing private companies and rural cooperatives to develop infrastructure for cleaning, sorting, grading, and packaging at village sub-yards.
- Encouraging traders to reorganize as independent agents or contractor representatives.

For successful implementation, two proactive measures are recommended:

1. **Awareness Campaigns:** The central government should widely publicize the benefits of APMR amendments to key stakeholders, including farmers, traders, processors, consumers, and local governance bodies (PRIs).
2. **Financial Incentives:** A grant package should be introduced to compensate states for potential revenue losses, linked to the adoption of Model Act reforms.

Additionally, independent of legislative changes, immediate steps are required to improve APMC functioning:

- Regular elections for market committees.
- Mandatory reinvestment of market fees into infrastructure development.
- Liberalization of trader and market functionary licensing.
- Promotion of grading, standardization, and quality certification.
- Establishment of village-level sorting, grading, and packaging facilities.

### Simplification and Rationalization of Marketing and Food Processing Regulations

Beyond wholesale market regulations, numerous laws impact agricultural marketing. A review by Acharya (2004)<sup>[2]</sup> and GOI identified 222 legislative enactments, many of which have been repealed or modified. However, significant barriers remain:

- **Complex Licensing and Regulatory Environment:** Despite deregulation, many small-scale, low-technology firms continue to operate under restrictive laws, dominating the food processing industry.
- **Temporary Policy Changes:** Stocking limits and movement restrictions on major agricultural products have only been temporarily lifted, discouraging long-term investment.
- **Uncertain Investment Climate:** Restrictions on bulk handling and storage have only been partially removed, making investors wary of policy reversals.
- **Fragmented Oversight:** The food processing sector is governed by at least 14 laws under 15 different ministries, leading to regulatory inefficiencies.

- **Government Intervention in Sugar Markets:** Sugarcane processors are still subject to government levies, with 10% of sugar output reserved for state-controlled sales. Additionally, free-market sugar sales remain under controlled release quotas.
- **Other Market Distortions:** Restrictions persist on futures trading in livestock products and monopsony procurement of raw cotton in Maharashtra.

To foster growth in the food processing sector, it is recommended that:

1. **Enactment of the Unified Food Law:** A draft Integrated Food Law is under parliamentary review. Its swift implementation will streamline regulations, shift from multi-agency oversight to a unified structure, and encourage self-regulation by the industry.
2. **Policy Stability for Investors:** Concerns over regulatory uncertainty should be addressed through legislative guarantees, ensuring that restrictions on storage, movement, and bulk handling are lifted permanently.
3. **Replacing the Essential Commodities Act:** A new, simplified law should empower the government to impose restrictions only during emergencies while widely publicizing deregulation to boost investor confidence.

### Agricultural Price Policy and Food Management

Agricultural price policy plays a crucial role in stabilizing prices and influencing the farm-to-retail price spread. Over the past fifty years, its objectives and instruments have shifted significantly. The policy has encouraged technological adoption, facilitated cereal production expansion, and improved food accessibility through the Public Distribution System (PDS). Additionally, input and food subsidies have kept staple cereal prices low, benefiting farmers, consumers, and industry.

However, recent concerns include:

- **Excessive Minimum Support Prices (MSP):** Over the past six to seven years, MSPs for rice and wheat have been set higher than Commission for Agricultural Costs and Prices (CACP) recommendations, leading to excessive stock accumulation and inflated public procurement costs. Political considerations in coalition governments further exacerbate this trend.
- **Inefficiencies in Foodgrain Management:** Stock surpluses have arisen due to relaxed Fair Average Quality (FAQ) norms, poor timing of PDS price hikes, and inconsistent trade policies. However, current stock levels are now close to prescribed minimums.
- **State-Advised Prices (SAP) for Sugarcane:** Some states set SAPs higher than statutory minimum prices, making sugar production unprofitable and contributing to cyclical arrears in cane payments.
- **Unequal MSP Implementation:** MSP procurement is largely effective in Punjab, Haryana, Western Uttar Pradesh, and Andhra Pradesh, while farmers in other surplus-producing states struggle to receive MSPs due to inadequate Food Corporation of India (FCI) operations.

To enhance the effectiveness of price policies, the following recommendations are proposed:

1. **Statutory Status for CACP:** The CACP's MSP recommendations should be legally binding to prevent politically motivated price distortions.
2. **Phasing Out Ineffective Policy Instruments:** These include levies on rice millers and sugar factories, SAPs for

sugarcane, controls on sugar quota releases, and Maharashtra's raw cotton monopoly procurement.

### 3. Decentralization of Price Support Purchases

- Greater responsibility for price support should be given to state agencies in traditional surplus regions like Punjab and Haryana.
- FCI should shift its focus to emerging surplus states where procurement operations are weak.
- Coarse cereals procurement and distribution should be delegated to state governments with financial backing from the center.

4. **Improving PDS Transparency:** Issues such as leakages and misallocation of subsidized grains can be addressed by publicizing PDS stock levels, beneficiary lists, and pricing information while involving local governance bodies in oversight.

By implementing these reforms, India can create a more efficient, market-driven agricultural system that balances the interests of farmers, traders, consumers, and the food processing industry.

### Conclusion

Despite being the world's second-largest producer of vegetables and third-largest producer of fruits, India struggles with significant post-harvest losses due to inadequate processing, storage, and logistics. Strengthening infrastructure and adopting modern preservation technologies can prevent wastage and maximize farmers' returns. Furthermore, investing in post-harvest processing, value addition, and global market integration will boost agricultural exports and create new economic opportunities. The role of agriculture in economic development remains vital, particularly in reducing poverty and ensuring food security. Increasing agricultural productivity in developing nations, especially in Sub-Saharan Africa and South Asia, has the potential to lift millions out of poverty. However, this requires overcoming several challenges, including inefficient land use, market failures, limited access to finance, and weak institutional support. Agricultural transformation must be driven by innovative policies, technological advancements, and enhanced rural infrastructure. Governments, private sector entities, NGOs, and international organizations must collaborate to foster agricultural growth. The adoption of modern farming techniques, digital extension services, and risk management solutions will further enhance productivity and resilience. Addressing key policy challenges such as property rights, rural financing, and market stabilization is essential to sustaining agricultural development. Policymakers and economists must prioritize these challenges to ensure the long-term sustainability and economic viability of the agricultural sector.

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