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# Influencing India's Wheat Industry: The Role of MSP, Supply Chain Innovations, and Private Sector Interventions

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**Research Question:** How have the Minimum Support Price (MSP) system and supply chain innovations influenced India's wheat industry, and what role does ITC Aashirvaad play as a case study of private sector intervention?

## Abstract

The Indian agricultural sector, particularly the wheat industry, is vital for national food security and farmer livelihoods but remains vulnerable to challenges such as price volatility, infrastructural inefficiencies, and environmental disruptions. This paper explores the influence of the Minimum Support Price (MSP) system and innovative supply chain measures on stabilizing the wheat market. While MSP has provided income security and reduced market imperfections, it has also contributed to monocropping tendencies and fiscal challenges. The paper also examines the pivotal role of private sector initiatives, using ITC Aashirvaad and its e-Choupal platform as a case study, to illustrate how digital rural infrastructure and direct market linkages can complement government policies, enhance supply chain efficiency, and improve farmer outcomes.

**Key Words:** Indian agriculture, wheat industry, MSP, supply chain innovations, ITC Aashirvaad

## Introduction

Agriculture forms the backbone of India's economy, contributing approximately 18% to the nation's Gross Domestic Product (GDP) (Keelery, 2023) and employing nearly 49.6% of the workforce (IBEF, 2022).. The agricultural sector is an important source of employment and food security for millions of Indians. The sector has also shown great resilience in the face of adversities. For instance, the share of workers in the manufacturing sector fell from 12.1% to 11.4% post-pandemic. At the same time, the proportion of workers in the agriculture industry went from 42.5% to 46.1% during the pandemic (Rajora, 2024). Within the agricultural sector, accounting for 35-40% of India's total food grain production, wheat is one of the major crops. As a staple food for many across the country, wheat is critical to the diet and secures the livelihood of much of the rural population.

Given the economic and social significance of wheat to the livelihoods of many, creating a stable and efficient production and distribution system for the crop is an important sustainable agriculture issue in India. The agricultural sector and the wheat market, specifically, are characterized as having high volatility due to changes in

demand, environmental factors, and global market influences that affect wholesale and retail prices. Price volatility represents a risk to farmer incomes, and price uncertainty among farmers is also disruptive to their ability to make financial decisions about food safety. Furthermore, there are inefficiencies at multiple levels throughout the supply chain, including post-harvest losses, limited storage capacity, poor transportation, and disorganization. Inefficient distribution practices are a waste of finance and food. Among the policy instruments to manage these concerns, the Indian government has introduced the Minimum Support Price Programs (MSP). As part of this, the government provides price support to stabilize farm incomes by purchasing wheat from farmers and transporting wheat for distribution in public markets. Additionally, other supply chain mechanisms have also been introduced to stabilize the wheat market. In line with the aforementioned, this research paper aims to answer the following question: **How have the Minimum Support Price (MSP) system and supply chain innovations influenced India's wheat industry, and what role does ITC Aashirvaad play as a case study of private sector intervention?**

This paper argues that while the MSP and supply chain mechanisms have positively impacted India's wheat industry by stabilizing prices and improving logistics, private sector engagement, exemplified by ITC Aashirvaad, plays a critical role in bridging gaps and enhancing outcomes for farmers and the industry at large.

## Background

Forecasted to grow by 3.8% in FY25 (PIB, 2025), the agriculture sector continues to be a fundamental contributor to the Indian economy. As mentioned in the introduction, it accounts for a substantial portion of the GDP, employs a large percentage of the workforce, and plays a crucial role in food security.

The agriculture industry is fundamental for ensuring the nation's food security and, through the upstream and downstream connections, it influences the growth of the secondary and tertiary sectors of the economy. For instance, agriculture is pivotal in developing allied industries such as dairy, poultry, and fisheries. Additionally, due to employing a large percentage of the workforce, the sector underpins livelihoods and plays a pivotal role in sculpting rural India, where over 65% of the total population resides (The World Bank, 2022). For a substantial proportion of the population, agriculture isn't just a means of income but a way of life, deeply woven into rural families' social and cultural heritage. Every ₹1 invested in agricultural research and education yields a return of ₹13.85 (PIB, 2024), epitomizing how powerful this sector is in driving growth, improving productivity, and supporting rural development.

Even though the industrial and service sectors have expanded significantly over the years, agriculture still holds a crucial place in India's economy. It plays a key role in ensuring food self-sufficiency and supports the backbone of national food security schemes. The true strength of the sector was especially witnessed during the COVID-19 pandemic, when agriculture was the only major part of the economy that continued to grow. During this period, Agriculture and Allied Sectors registered a growth of 3.4% during 2020-21, while overall economic growth declined by -7.2% during the same period (PIB, 2021b). This shows that agriculture isn't just an old or traditional sector - it's a vital, evolving space that helps drive inclusive development, reduce poverty, and improve nutrition across the country.

Among the various agricultural crops cultivated in India, wheat is strategically significant due to its role in ensuring food security and supporting millions of farmers across the country. It is the second most cultivated crop in India, following rice. Wheat stands as one of India's most vital crops, second only to rice in overall production. In FY24, grain production reached 332 million tonnes (Keelery, 2025). This grain is a dietary staple for millions, especially in the northern and central regions. Wheat production in India changed drastically after independence during the

Green Revolution in the 1960s and 70s (Ramadas, Kumar, and Singh, 2019). With the introduction of high-yielding wheat varieties, better irrigation systems, and more widespread use of fertilizers, the country saw a major boost in output that shaped its agricultural landscape for decades to come.

Additionally, government initiatives such as PDS (Public Distribution System) aim at providing subsidized food grains to eligible households through schemes like the National Food Security Act (NFSA) of 2013. Under this act, approximately two-thirds of the Indian population - up to 75% in rural areas and 50% in urban areas - is legally entitled to receive subsidized food grains, including wheat, at affordable prices (National Food Security Portal, 2013). In this system, wheat is more than just a crop; it's a vital tool used by the government to tackle hunger and malnutrition.

## Problem Statement

In spite of its significance, the agricultural sector in India keeps encountering major issues when it comes to adapting to modern pressures. From being exposed to price volatilities to being vulnerable to external shocks, the ups and downs of this sector affect the financial stability of farmers and the nation's food security. Inadequate irrigation systems, declining soil health, varied and inconsistent cultivation methods, and suboptimal crop management practices are some of the primary barriers faced by the sector. These issues are further exacerbated by the reduction in arable land and erratic rainfall patterns. Between 2015 and 2021 alone, India lost 33.9 million hectares of crops due to excess rainfall and another 35 million hectares due to drought (Tapan Singhel and Murphy, 2024).

As mentioned previously, among the many crops that contribute to India's agricultural sector, wheat plays a significant role, accounting for approximately 14% of the total global wheat production (USDA, 2024). Despite this, the country faces inherent challenges in stabilizing production. The overall yield of wheat is greatly affected by seasonal influences, causing the output to go from excess to insufficient from year to year. In the 2022–23 marketing year, India's wheat production was initially estimated to reach approximately 110 million metric tonnes (MMT). However, due to extreme heatwaves in March 2022, which led to a rise in temperatures and significant yield reductions, the U.S. Department of Agriculture's Foreign Agricultural Service (USDA FAS) revised its wheat production estimate downward to 99 MMT, which epitomizes the vulnerability of the sector to climatic factors (USDA, 2022). Such disruptions pose significant challenges to the overall production and farmers' income.

Moreover, high input prices are another challenge farmers face in wheat farming. In states like Haryana, where wheat farming is widespread, farmers often face financial challenges. For instance, the leasing rates typically range from ₹60,000 to ₹70,000 per acre per year. In addition to these leasing expenses, farmers also face input costs of ₹10,000 to ₹15,000 per acre for essentials such as seeds, fertilizers, and other agricultural inputs (Arora, 2025). Such high costs make it strenuous for farmers to maintain profits, especially at times when pricing and yields are erratic.

Another major barrier in the wheat sector is post-harvest losses. It is estimated that 3.28 kg per quintal of wheat is lost after it is harvested, mainly because of underdeveloped storage facilities or moisture-related problems (Esther et al., 2014). This causes large amounts of wastage, which further mitigates farmers' incomes and contributes to supply chain inefficiencies. For instance, India's food grain production reached 311 million metric tonnes (MMT) in 2023, yet the available storage infrastructure could accommodate only 145 MMT (Donley, 2024). The gap between the available storage capacity and wheat yield highlights the lack of adequate infrastructure, especially for a crop as perishable as this.

**Analyzing MSP and Supply Chain Mechanisms in India's Wheat Industry**

The Minimum Support Price (MSP) is a key policy instrument employed by the Indian government to shield farmers from the uncertainties of market price fluctuations. By establishing a price floor - set above prevailing market prices - MSP guarantees farmers a minimum income, thereby addressing market imperfections such as imperfect competition, monopolistic intermediaries, and volatility induced by international price swings. Fundamentally, the MSP aims to stabilize farmer incomes and ensure a consistent supply of staple food grains, thereby supporting both agricultural livelihoods and broader economic stability.

The MSP is determined annually based on recommendations from the Commission for Agricultural Costs and Prices (CACP), which considers factors such as input costs, production expenses, and farmer welfare. Over recent years, the MSP for wheat has shown a steady upward trajectory to keep pace with rising costs and to provide farmers with a reasonable profit margin. For example, the MSP for wheat was set at ₹1,925 per quintal in 2019-20, increased to ₹1,975 in 2020-21, further rose to ₹2,125 for the 2023-24 season (Department of Food and Public Distribution, 2025), and was recently raised to ₹2,425 per quintal for 2025-26 - a 6.6% increase over the previous year (Times of India, 2024). This incremental increase aims to provide farmers with income security by cushioning them against price volatility, particularly in key wheat-producing states like Punjab, Haryana, and Madhya Pradesh, where government procurement mechanisms are robust and reliable.

The Food Corporation of India (FCI) plays a central role in operationalizing the MSP system by purchasing wheat at the MSP and maintaining buffer stocks. These reserves stabilize market prices and availability, and also feed into the Public Distribution System (PDS), which supplies subsidized food grains to over 800 million beneficiaries under the National Food Security Act (National Food Security Portal, 2013).

While the MSP-driven procurement is crucial for national food security, it imposes a significant fiscal burden on the government. The Union Budget allocation for food subsidies in FY 2024–25 stands at ₹2.05 lakh crore, but recent projections indicate that actual expenditures could rise to ₹2.25 lakh crore - an 11% increase largely attributed to elevated procurement costs from MSP hikes on key crops like wheat (Singh and Bhardwaj, 2024). Furthermore, the assurance of guaranteed procurement at rising MSPs has incentivized many farmers to focus disproportionately on wheat cultivation, encouraging monocropping and reducing crop diversification. This skewed production pattern has led to wheat surpluses in certain regions, often exceeding local demand and straining storage infrastructure. Consequently, while MSP promotes income stability, it also risks creating supply-side inefficiencies and ecological challenges associated with monoculture practices.

Apart from price mechanisms, India's wheat supply chain is also plagued by structural inefficiencies that impact producers and consumers. A supply chain that is effective aims to mitigate wastage, reduce costs, and ensure on-time deliveries from both farms to consumers or storage facilities. However, there are many challenges in the Indian Wheat Supply Chain. For example, over 18% of the FCI's storage capacity relies on temporary Covered and Plinth (CAP) storage (PRS India, 2021): a raised, usually elevated, platform, often made of bricks or concrete, on which bags of grains are stacked. Further complicating matters are inefficiencies in transportation and manual procurement systems - **g**rain transport faces delays due to fragmented logistics networks, especially during peak seasons. The 2023 CAG report highlighted a number of loopholes in improving the efficiency of India's wheat logistics. One major concern was the failure to secure long-term contracts with Indian Railways for transporting grain, a step that could have saved time and money. Instead, avoidable delays and extra costs piled up (CAG, 2023). Also, the reliance on manual procurement processes has accommodated inefficiencies and corruption. Such outdated processes have not only slowed down execution but also raised costs (Sukhtankar and Vaishnav, 2015).

Acknowledging such challenges, the state and the private sector have taken various initiatives to modernize the processes. An example is the production of the modern steel silos through the public private partnership, which has added over 111.125 Lakh Metric Tonnes (LMT) of high-quality storage capacity in major farming regions (PIB, 2022). These silos help in drastically cutting post-harvest losses and streamlining storage, tackling one of the wheat sector's most detrimental challenges. Also, digitized procurement platforms like the Electronic National Agriculture Market (e-NAM) have aided transactions by improving pricing. Assisting these initiatives, the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has been allocated over ₹93,000 crore between 2021 and 2026 to strengthen irrigation infrastructure across the country (PIB, 2021a). This investment plays a key role in improving wheat productivity and helping farmers cope with increasing climate-related challenges. Moreover, these initiatives have displayed satisfactory results. For example modern these silo systems have helped the Food Corporation of India (FCI) keep wheat storage losses as low as 0.3% over three years (Kumar et al., 2021).

**Private Sector Intervention - A Case Study of ITC Aashirvaad**

Private sector companies like ITC Aashirvaad play an important complementary role in advancing government initiatives such as the MSP system and enhancing supply chain efficiencies in India's wheat market through innovations.

With the introduction of its flagship brand Aashirvad in May 2002 (Aashirvad, 2025), the great Indian conglomerate ITC Limited has significantly impacted the nation's wheat flour sector. Since then, Aashirvad has been leading the market with its 52% market share in the packed atta sector, valuing around INR 2,700 crores (Osum, 2024).

Introduced in 2000, e-Choupal revolutionized agricultural procurement by directly connecting ITC with farmers through internet-enabled kiosks in rural areas. Since its introduction, the e-Choupal initiative has helped farmers escape the vicious cycle of low risk-taking ability that arises from low investment, low productivity, weak market orientation, low value addition, low margin, and low risk-taking ability (ITC, 2019). This initiative connects ITC with farmers through internet-enabled kiosks in rural areas. The platform provides farmers with real-time market information, weather forecasts, and price trends, effectively bypassing traditional intermediaries and reducing information asymmetry. E-choupal allows the farmers to analyze futures prices both locally and globally before going to market. Additionally, it operates through a vast network of 6,100 internet-enabled kiosks across 35,000 villages in 10 states, reaching over 4 million farmers, which makes it the largest rural digital infrastructure in the world (Gayathri, 2019).

Additionally, the MSP (minimum support price) is incorporated by ITC in their wheat procurement strategy, which ensures that farmers receive at least the government-mandated prices. For example, in the case of Madhya Pradesh, where the wheat procurement target was surpassed by 76.10 lakh metric tonnes (LMT) of wheat (TNN, 2025), private sector partnership, especially ITCs, contributed to achieving this feat. ITC purchased over 2.5 lakh tonnes of wheat through FPOs and its wheat purchase from farmers across is next to the procurement by the Food Corporation of India (Das, 2024).

ITC's agri-business initiatives, notably the e-Choupal platform, have significantly aided agricultural value chains by providing farmers with services including quality-based pricing, logistical support, and access to real-time market information. For instance, farmers can use the e-Choupal to place orders of seeds, fertilizers, and other farming products, such as consumer goods from ITC or its partners, at prices lower than those available from village traders (Actualize, 2011). As a result, farmers benefit from more accurate weigh-ins, faster processing, quicker payments, and access to a wide range of information. This transparency and empowerment have led to

increased trust and fairness in the supply chain, ultimately improving farmer incomes and reducing post-harvest losses. Moreover, ITC has improved the overall supply chain efficiency by shortening the supply chain and ensuring fair price transmission. The e-Choupal system has had a measurable impact on farmers' choices and profitability. As a matter of fact, farmers selling directly to ITC through an e-Choupal typically receive a higher price for their crops than they would receive through the mandi system, on average about 2.5% higher (InspireIP, 2022).

Private sector companies like ITC Aashirvaad play a vital role in complementing government efforts such as the MSP system by driving supply chain innovations, improving market access, and empowering farmers through direct engagement and technology adoption. However, the expansion of initiatives like e-Choupal and other private-led interventions also faces significant challenges. Sustained success depends on continuous investment, robust digital infrastructure, and local community acceptance, all of which vary considerably across India's diverse agricultural landscape. Furthermore, there are valid concerns about the concentration of power in the hands of private players, which may marginalize smaller or resource-poor farmers if adequate protections and inclusive policies are not in place. Therefore, while private sector involvement is indispensable, it must be balanced with strong regulatory frameworks and government oversight to ensure equitable benefits across the farming community.

## Conclusion

The agricultural sector forms the backbone of the indian economy; however, despite its importance, the sector continues to face several challenges and remains highly volatile due to various factors like unpredictable weather, fluctuating market prices, inadequate infrastructure, policy uncertainty, and rising input costs. These issues become more pronounced when dealing with relatively staple crops like wheat, as they can severely impact national food security and farmers' livelihoods. The aforementioned makes government intervention through tools like MSP and supply chain innovations essential. This research paper aimed to analyse how these initiatives have influenced India's wheat industry while evaluating the role that privacy sector players like ITC Aashirvaad play in ensuring stability.

MSP is a critical policy tool for stabilizing farmer incomes and ensuring food security in India by addressing market imperfections and mitigating price volatility. While it has successfully provided income security and boosted procurement in key states like Punjab, Haryana, and Madhya Pradesh, the system also imposes significant fiscal costs and has fostered monocropping trends, particularly in wheat. These unintended consequences, including storage challenges and reduced crop diversity, highlight the need for balanced policy measures that ensure both economic stability and agricultural sustainability.

In response to these challenges and to better manage surplus production, the government, in collaboration with private sector partners, has been implementing innovative solutions such as modern steel silos for efficient storage and reducing wastage. Initiatives like e-NAM (Electronic National Agriculture Market) have been pivotal in digitizing procurement processes, fostering collaboration among private players and farmers, and streamlining the marketing of agricultural produce. Furthermore, schemes like the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) have enhanced irrigation infrastructure, improving productivity and enabling quicker responses to climate-related disruptions. These measures collectively aim to address supply-side inefficiencies and build resilience within the agricultural ecosystem.

Private sector initiatives like ITC's flagship brand Aashirvaad and its innovative farmer engagement platform, e-Choupal, significantly strengthen and complement the government's MSP framework. ITC's e-Choupal leverages

digital rural infrastructure to connect millions of farmers directly to a marketplace, shifting from traditional supply chains dominated by intermediaries to a highly efficient, rural real-time market. This approach minimizes intermediaries and maximizes farmer price realization, often yielding prices approximately 2.5% higher than those traditional markets offer.

By fostering a balanced synergy between government policies and private sector innovations, India can pave the way for a resilient and sustainable wheat industry that benefits both farmers and the nation.

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