KAUTILYA
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Issue Brief Series

“India’s MSP and China’s Agricultural Support Strategies”

Issue Brief: IB-2026-43

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Cite this report as: Kumar, A. (2026) “India’s MSP and China’s Agricultural Support Strategies” [online]. Available at: https://www.kspp.edu.in/issue-brief/indias-msp-and-chinas-agricultural-support-stratetegies

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India's MSP and China's Agricultural Support Strategies

Abstract

This comparative study uses the Advocacy Coalition Framework (ACF) to evaluate how India's Minimum Support Price (MSP) system and China's agricultural support strategies influence farm productivity, trade outcomes, farmer welfare, and WTO compliance. Drawing on recent data (including 2023 trade statistics) and mixed qualitative–quantitative analysis, we find that India's MSP (aimed at food security) has stabilised farmer incomes but also created fiscal burdens and market distortions. China's model of heavy investment in mechanisation, R&D and targeted subsidies has driven superior yields and rural incomes, though with environmental costs and international scrutiny. The analysis highlights trade-offs: India's welfare-oriented safety nets need efficiency-enhancing reforms, while China's productivity gains invite lessons on sustainability.

Introduction

Agriculture is crucial for both India and China, but is supported by very different policies. India guarantees minimum prices for key crops to protect farmers and ensure food security (PIB, 2024), whereas China emphasises modernisation, investing heavily in mechanisation, infrastructure, and science (OECD, 2023; National Bureau of Statistics of China, 2025). These contrasting models raise a fundamental question: *How do India's MSP system and China's agricultural support strategies affect agricultural productivity, trade outcomes, farmer welfare, and adherence to WTO rules?* To answer this, I apply the Advocacy Coalition Framework (ACF), which helps explain how entrenched policy coalitions shape long-term outcomes (Hoefer, 2023). Through a comparative case study of India and China, using recent empirical data and policy analyses, I examine the implications of these divergent approaches. Understanding this is timely:

both countries must balance domestic farm needs with global trade commitments and low farm productivity.

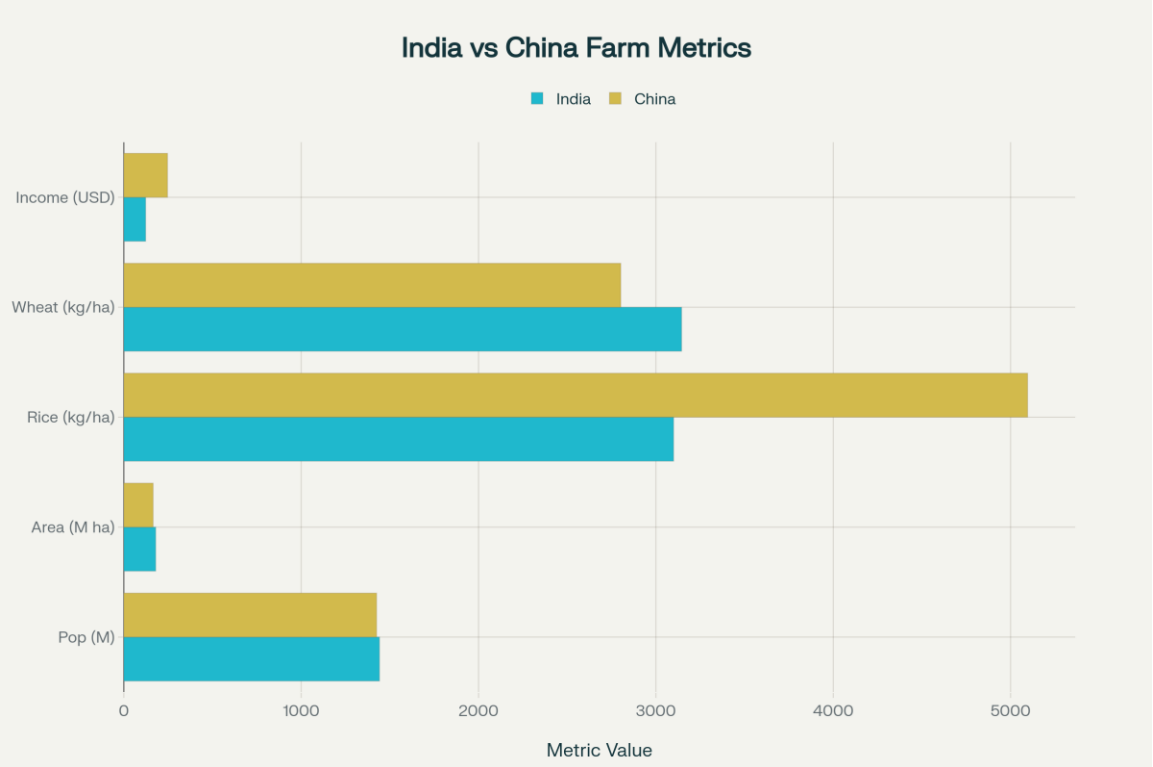

Figure 1. Key Agricultural Metrics Comparison: India vs China. *(Author)*

Indicator	China	India
Rural population (million)	635.69	851.53
Rural population (% of total)	47	68
Rural poverty rate (%)	8.5	25.7 (2011 est.)
GDP per capita (current USD)	6,807.4	1,497.5
Employment in agriculture	31.4	47
Smallholder farmers (less than two hectares) (%)	97.5 (2006 est.)	85.9 (2006 est.)
Cultivated land (% of land area)	52	60.3
Irrigated area (% cultivated land)	52	35.2 (2010 est.)
Fertilizer consumption (kg per hectare of arable land)	485.7	163.7
Agriculture, value added (% GDP)	10.0	18.0

Sources: World Development Indicators (2014), FAO (2012), Zhou (2010), National Bureau of Statistics of China (2014)

Figure 2. Key Agricultural Indicator Comparison: India vs China.

Literature Review & Theoretical Framework (ACF)

ACF (Sabatier, 1988) posits that policy subsystems are controlled by coalitions of stakeholders (policy-makers, interest groups, experts) who share core beliefs about a problem and coordinate over time. Coalitions use strategies (e.g. legislation, research, public campaigns) to advance their policy goals. Applied here, ACF suggests that in each country, a dominant coalition's beliefs have shaped agricultural policy. In India, a powerful coalition of farmers' unions, supportive political parties, and bureaucracy holds the core belief that MSP and procurement are essential for farmer survival and national food self-sufficiency (PIB, 2024). This coalition has resisted reforms that threaten MSP, ensuring its persistence. In China, the coalition is led by central government leaders and technocratic agencies, prioritising productivity and self-reliance (OECD, 2023). Its core belief is that modernisation (through technology and subsidies) will drive growth. Notably, when a WTO panel ruled China's grain support was excessive, this Chinese coalition adapted its policies (shifting to direct payments and R&D) (Brink et al., 2019).

Using ACF, I trace how each coalition's beliefs and power explain policy stability or change. For example, India's farmers' coalition successfully blocked MSP-reducing farm laws in 2021, whereas China's leadership coalition swiftly reformulated support after WTO disputes. In the following analysis, I consistently consider how coalition agendas and learning processes influence outcomes. Thus, this review introduces ACF and identifies India's and China's dominant coalitions as the theoretical lens for the comparative study.

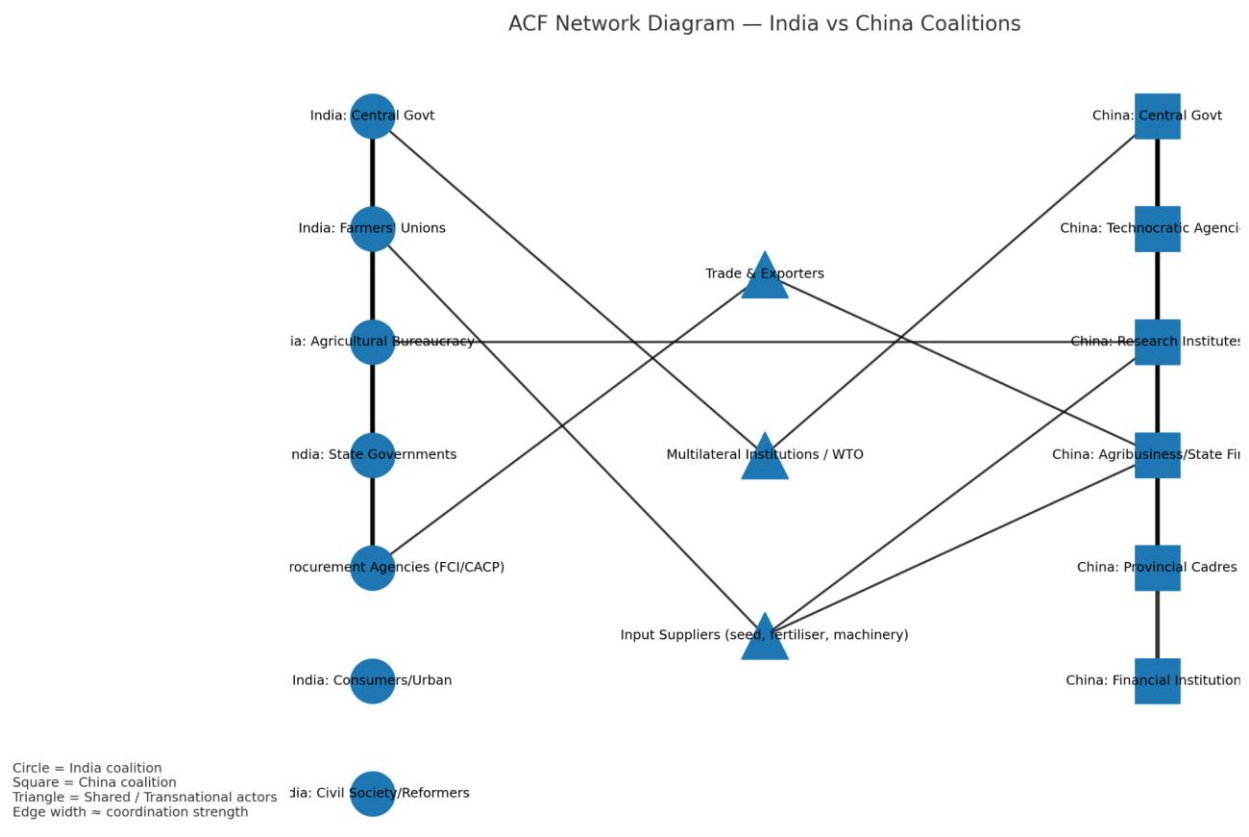

Figure 3. ACF Network Diagram: India vs China. *(Author)*

What the diagram shows (quick guide)

- Circle nodes = India coalition actors (MSP/procurement oriented).
- Square nodes = China coalition actors (technocratic/modernisation oriented).
- Triangle nodes = Shared or transnational actors (trade, WTO, input suppliers).
- Edge width ≈ coordination strength (thicker = closer/stronger coordination within a coalition).

Methodology

This paper uses a comparative case study design, examining India and China as two large agrarian economies with distinct agricultural support regimes. The cases were selected because both face the challenge of feeding huge populations with limited land, yet have taken different

policy paths (price guarantees vs. modernisation). Comparing them allows us to learn how policy choices driven by different coalitions lead to different economic and social outcomes.

I employ mixed methods. Qualitatively, I conduct process tracing of each country's policy evolution, using government documents, press releases, WTO reports, and academic studies. For India, I review CACP reports on MSP, official procurement data, and legislative debates on farm reform. For China, I examine policy documents, Ministry of Agriculture announcements, and WTO panel findings (e.g., DS511 on grain subsidies)(Ministry of Statistics & Programme Implementation, 2021; Brink et al., 2019; Shukla et al., 2023). This illuminates the historical context and institutional details of each policy subsystem.

Quantitatively, I compile comparative indicators, such as cereal yield (t/ha), total grain output, farm income, and export volumes for staple commodities. Data are drawn from sources like the Indian Ministry of Agriculture, China's National Bureau of Statistics, FAO/World Bank databases, and the 2023 export dataset (Atlas of Economic Complexity, 2023). For instance, China's 2024 rural per-capita disposable income was ¥23,119, which I compare to India's average farm household income (₹10,218 per month in 2018–19). I also analyse trade figures: in 2023, India's rice exports were ~$10.26 billion (19% of its agricultural exports), whereas China's major agri-exports were high-value manufactures like luggage (National Bureau of Statistics of China, 2025; Food and Agriculture Organization of the United Nations, n.d.).

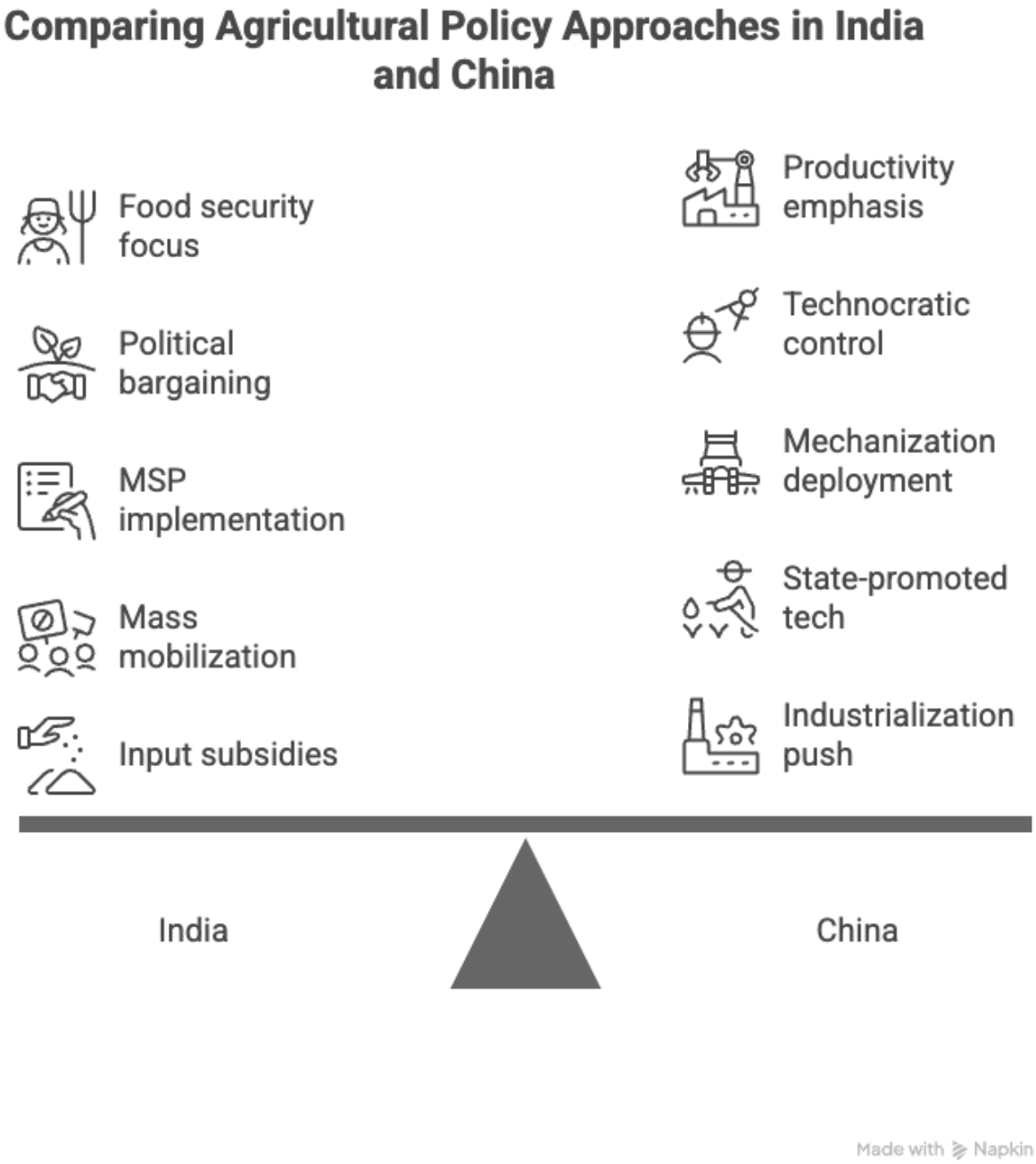

Figure 4. Key Agricultural Policy: India vs China. *(Author)*

In sum, I triangulate process-based narratives (to capture coalition strategies and policy changes) with quantitative comparisons. Throughout, ACF frames our interpretation: I note how

each coalition's actions (e.g. lobbying for MSP, or shifting to R&D in China) produce observed outcomes. I also systematically include counterarguments from the literature (e.g. claims that MSP distorts markets or China's model is unsustainable) and evaluate them using evidence and the ACF lens.

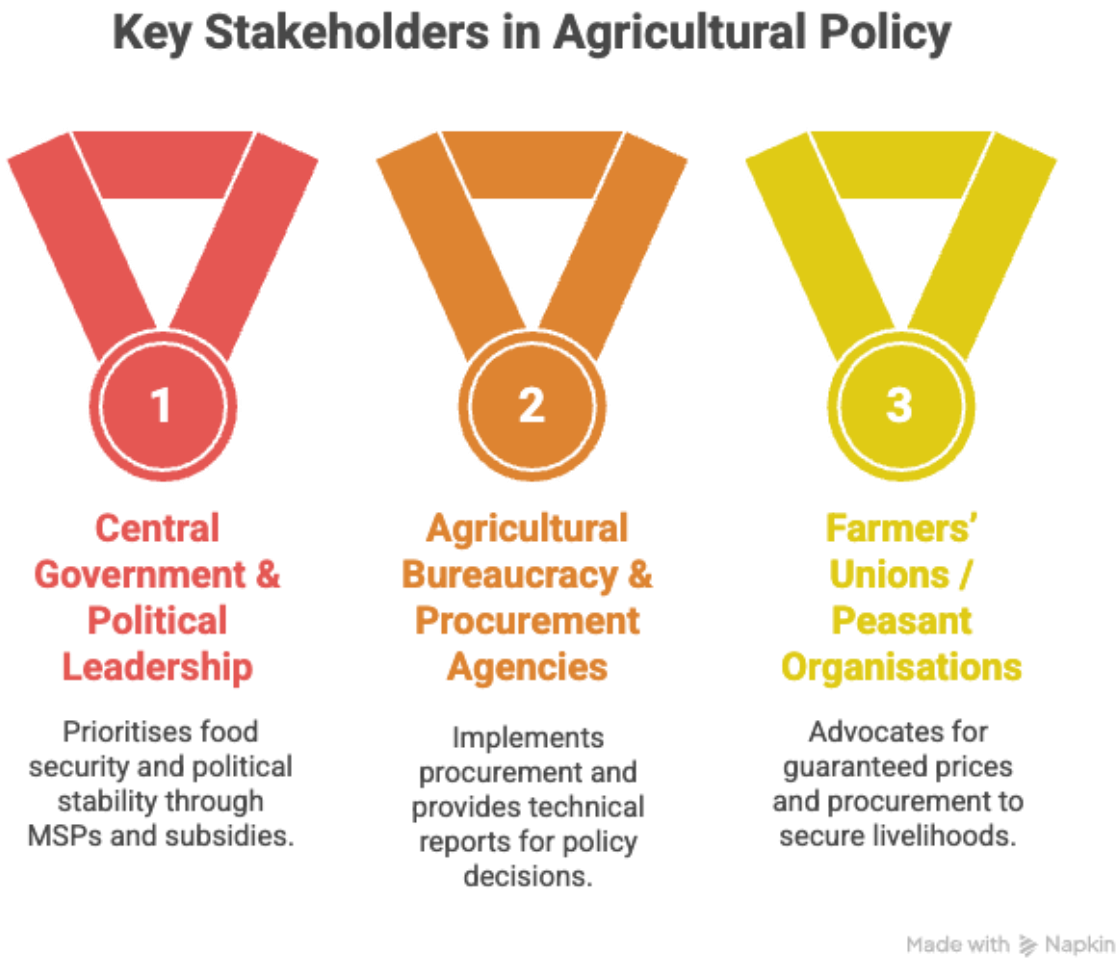

Figure 5. Key Stakeholders in Agricultural Policy in India. *(Author)*

India Case Analysis

1. MSP Policy Evolution and Structure

India's Minimum Support Price system was instituted in the 1960s to incentivise production of staple grains during the Green Revolution. Over time, it expanded to cover 23 crops, including rice, wheat, pulses, oilseeds and cotton. The Commission for Agricultural Costs and Prices (CACP) annually recommends MSPs based on production costs. Since 2018, the government has committed to setting MSP at least 1.5 times the A2+FL cost (variable cost plus family labour) for each crop (Ministry of Statistics & Programme Implementation, 2021). In practice, once MSPs are announced, state agencies purchase produce at MSP if market prices are lower. This procurement is most effective for wheat and paddy in major surplus states (Punjab, Haryana, Madhya Pradesh), forming stockpiles for the Public Distribution System (PDS) and a buffer against famine. For most other crops and regions, procurement is limited, so MSP often acts more as a price signal than a guaranteed sale (Press Trust of India, 2013).

A striking feature of India's MSP system is its uneven reach. Only a minority of farmers actually sell at MSP. Official estimates suggest that about 20–25% of India's wheat and rice output is procured by the government. In turn, the Shanta Kumar Committee (2015) reported that merely ~6% of farmers sell any produce at MSP (mainly large holders in the north-west)(2015, as cited in Ministry of Agriculture, 2021). Farmers in eastern and rain-fed regions (e.g. parts of Bihar, Odisha) often have no access to procurement centres and must accept market prices below MSP. Thus, MSPs' benefits are concentrated regionally, a structural issue that the government itself recognises.

Over the decades, MSP has become politically entrenched. An advocacy coalition of farmer unions, sympathetic political parties (especially in the Punjab-Haryana), and supportive

officials has grown around MSP. This coalition's shared belief is that MSP and public procurement are vital for farmers' welfare and national food security. Its influence is evident in India's politics: in 2020–21, proposed farm market reforms (which many feared would undermine MSP) triggered mass protests, forcing repeal of the laws (Press Information Bureau, 2024). From an ACF perspective, this demonstrates how the MSP-support coalition maintains policy stability by mobilising against changes that threaten their core belief system.

2. Agricultural Productivity and Crop Patterns

India's cereal productivity lags far behind China's. For example, average rice yield in India is only about 3.5 tonnes/hectare, while China's is roughly 6.5 t/ha. Similarly, India's wheat yield (~3.1 t/ha) is well below China's (~4.8–5.4 t/ha) (Press Trust of India, 2013). These gaps (often 50–100% higher yields in China) illustrate India's inefficiency in land use (KPMG India, 2024; Institute for Financial Management & Research, 2023). Multiple factors contribute to this: India's average farm size is very small (~1.1 ha), and machinery use is lower (roughly 40–45% mechanised). China has pursued land consolidation policies allowing larger, mechanised farms (often 3–5 ha), with machinery covering 57–70% of tasks. India's smallholders often cannot afford expensive equipment, and credit/access to inputs is patchy.

The MSP regime's incentive structure influences cropping patterns. By assuring high prices for rice and wheat, MSP has encouraged the expansion of these crops at the expense of others. This phenomenon is most extreme in Punjab and Haryana, nearly all land has shifted to a two-crop (rice-wheat) cycle, driving groundwater depletion and declining soil health (Ministry of Statistics & Programme Implementation, 2021). In contrast, pulses and millets (traditionally grown in semi-arid regions) have seen limited MSP support and production. The effect is a skewed

specialisation; India produces large surpluses of paddy and wheat, but remains deficient in oilseeds and has volatile outputs of fruits/vegetables.

Critics argue MSP dampens innovation (KPMG India, 2024), knowing that prices are guaranteed, farmers have less incentive to adopt higher-yield varieties or diversify into high-value crops. Indeed, studies note slower technological adoption for grains in MSP zones. However, defenders point out that without MSP, Indian farmers (with limited insurance and fragmented markets) might not even meet basic output levels. The evidence suggests MSP secured aggregate food supply but did not, by itself, raise productivity (Press Information Bureau, 2024). Achieving higher yields in India may require pairing MSP with extensions of modern inputs and reforms (an argument I revisit in policy implications).

Figure 6. Role of Indian agriculture in the Indian economy (Author)

3. Trade Outcomes and WTO Issues

India's MSP-backed production has made it a major exporter of certain staples. Rice is paramount; in 2023 (Atlas of Economic Complexity, 2023), India exported roughly $10.26 billion of rice (about 19% of agri export value), including non-basmati varieties that benefited from production surpluses. Other exports bolstered by MSP-driven production include wheat (when stocks are large), as well as spices, sugar, and textiles. In general, India runs an agricultural trade surplus in products it supports, and a deficit in those it does not (e.g. it imports oilseeds and pulses).

However, MSP also creates volatility in trade policy. When domestic prices rise, India has sometimes banned key exports. For example, due to high domestic wheat prices in 2022, India suspended overseas shipments to protect local consumers. Conversely, in bountiful years (e.g. 2023 for rice), India has subsidised or promoted exports to reduce stocks. Such swings have drawn international attention; critics label India's policy unpredictable (Council on Foreign Relations, 2025).

WTO rules have become a flashpoint. Under the WTO Agreement on Agriculture, India's subsidy levels (amber box) should not exceed 10% of the value of production (for developing countries). Yet multiple WTO notifications indicate that India's cereal price supports greatly exceed this. In 2021, the US and other members estimated that India's MSP for rice alone amounted to support worth 87% of production value. India defends itself by arguing that those calculations use outdated base periods and do not reflect current costs. But India has sought waivers in 2024; it secured an extension of the 'Peace Clause' allowing food subsidies above limits for food security reasons. Still, WTO scrutiny remains. In practice, India often uses non-WTO-compliant tools (like export bans and stock dumping) to control domestic prices, reflecting tension

between domestic policy goals and international rules (World Trade Organization, Committee on Agriculture, 2024).

4. Farmer Welfare and Income Effects

The MSP system has raised incomes for farmers who can access it, but many others remain on the margins (Ministry of Statistics & Programme Implementation, 2021). According to the NSS (2018–19), the average monthly income of an agricultural household was ₹10,218 (Ministry of Statistics & Programme Implementation, 2021). This figure grew from ₹6,426 in 2012–13, indicating progress, but it conceals extremes. In the prime MSP states (Punjab, Haryana), average farm household income reached over ₹26,700 per month (2018–19), whereas in weaker procurement states (Jharkhand, Odisha) it was under ₹5,000 (2018-19). In short, MSP has contributed to high incomes in pockets and low incomes elsewhere.

For those farmers participating in MSP procurements, incomes are relatively secure. The guaranteed price floor protects them from crashes. In years of surplus (e.g. 2022), MSP allowed record sales to the government. But many smallholders never sell to FCI at MSP – they sell to local traders at lower prices. These farmers rely on broader market trends and limited local competition, so their incomes fluctuate. The state has recognised these gaps; it complements MSP with schemes like direct cash transfers (PM-KISAN) and crop insurance (PMFBY) to reach the broader rural population (Press Information Bureau, 2024). This reflects an implicit belief within the pro-MSP coalition that direct support and MSP both matter for welfare.

Opponents of MSP point to its regressivity; it largely helps larger farmers of wheat and rice, not the poorest cultivators who grow millets or pulses. They argue resources would be better spent on universal programs. The counterargument is rooted in political economy; MSP is an

entrenched guarantee that smallholders distrust removing. Empirically, while MSP has not eliminated rural poverty, it arguably prevented mass destitution during recent price shocks (for instance, wheat prices in 2020–21). The welfare debate remains active in India's policy discourse.

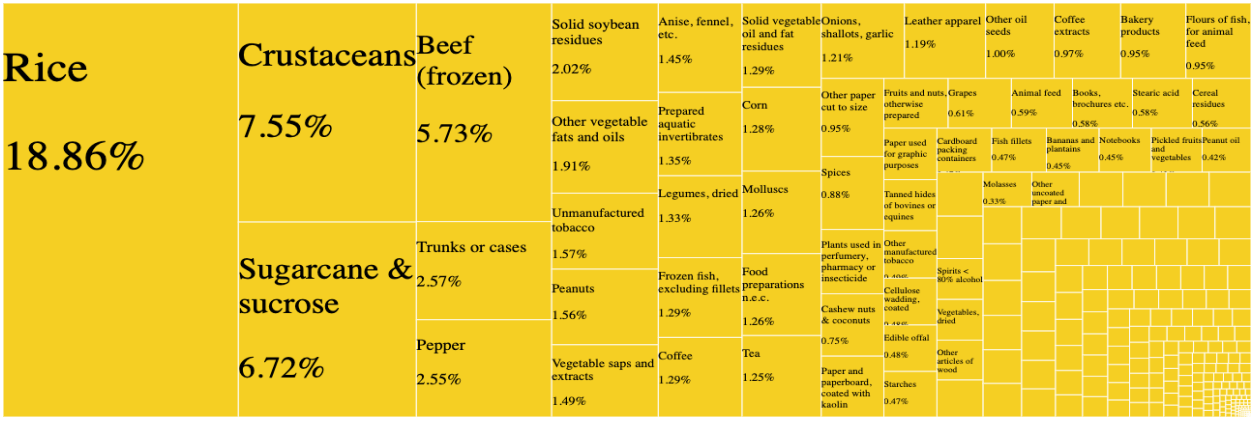

Figure 7. India's top export commodities in 2023 (agriculture-related). (The Atlas of Economic Complexity, 2023)

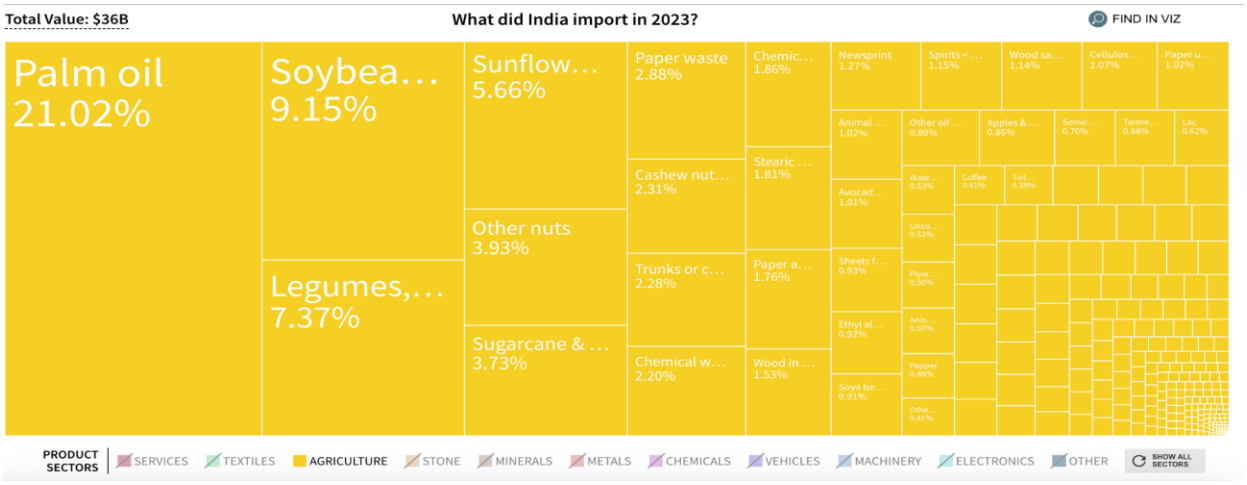

Figure 8. India's top import commodities in 2023 (agriculture-related). (The Atlas of Economic Complexity, 2023)

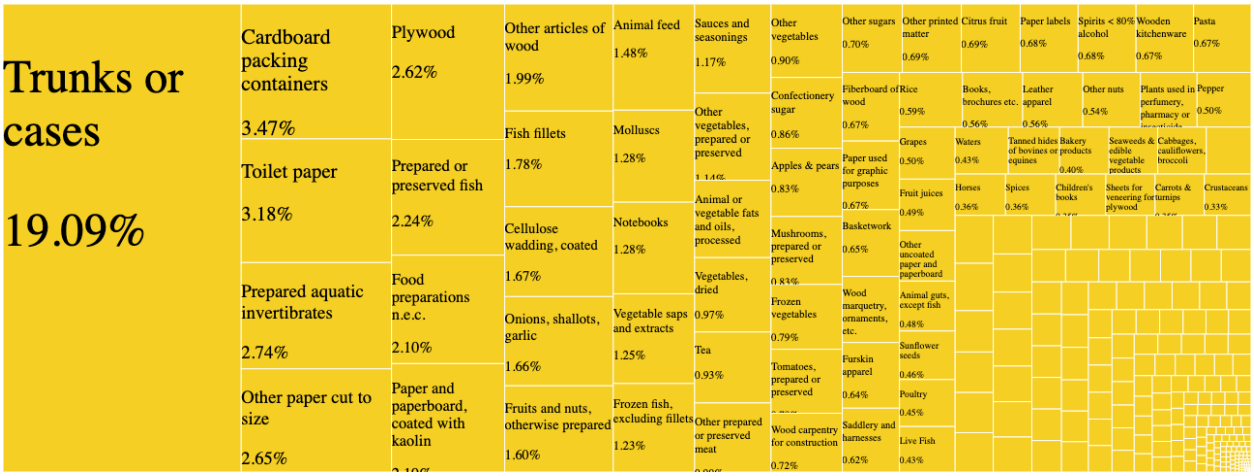

Figure 9. China's top export commodities in 2023 (agriculture-related).(The Atlas of Economic Complexity, 2023)

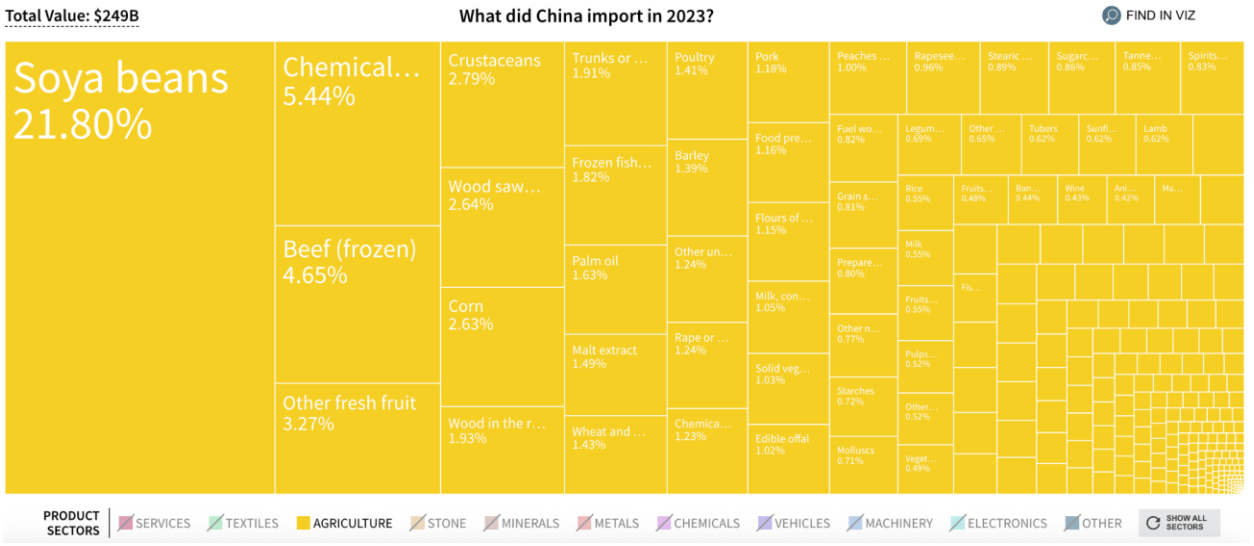

Figure 10. China's top import commodities in 2023 (agriculture-related). (The Atlas of Economic Complexity, 2023)

China Case Analysis

1. Support Policies and Modernisation Strategy

China's agricultural support has been characterised by a shift from price supports to investment in modernisation (OECD, 2023; National Bureau of Statistics of China, 2025). In the late 20th century, the Chinese state set minimum purchase prices for key grains (wheat, rice, and maize) and bought large harvests to ensure supply. For example, in the 2000s, the government routinely procured rice and wheat whenever market prices fell below the floor. These purchases were similar in spirit to MSP, providing income guarantees. However, China simultaneously invested heavily in rural development: new irrigation systems, rural roads, agricultural R&D (notably hybrid rice technology), and massive mechanisation programs.

A major turning point came after WTO accession in 2001. In 2016, a WTO panel (DS511) found that China's price support for wheat and rice (2012–15) vastly exceeded its agreed "AMS" limits by about ¥127.7 billion per year. Rather than risk sanctions, China responded by reforming its policy. It abolished the corn price support in 2016 and gradually reduced grain floor prices. Concurrently, it increased "green box" supports (Brink et al., 2019), direct income payments to grain farmers, subsidised insurance, and investments in agri-technology. Today, China's stated policy (under "rural revitalisation" plans) prioritises productivity growth; much subsidy spending goes to infrastructure (dams, storage), research on high-yield seeds, and training for farmers.

Institutionally, China has also changed land tenure rules to allow consolidation; farmers still own land collectively, but use rights can be leased, creating larger operations. By 2019, thousands of "modern agricultural counties" had fully mechanised key operations. The upshot is a system less reliant on price supports and more on upgrading the productive capacity of agriculture.

From an ACF standpoint, China's one-party coalition operated with a top-down approach (few public debates) and adjusted policies pragmatically after WTO rulings (Brink et al., 2019). This contrasts with India's slower, more politicised reforms.

2. Agricultural Productivity and Outputs

China's strategy translated into much higher yields and outputs. As noted, Chinese grain yields roughly double India's across staples (Press Trust of India, 2013; OECD, 2023). Total grain production in China reached ~706 million tonnes in 2024, compared to about 300 million tonnes in India (roughly the sum of paddy, wheat and coarse grains)(National Bureau of Statistics of China, 2025). This enormous output is supported by China's land-use efficiency; China has slightly less cultivable area (165 vs 180 million ha) but far higher yield per hectare. Labour productivity differs too: only ~25% of China's workforce is in agriculture (vs ~42% in India), reflecting much higher per-worker output in China. Mechanisation and scale are big factors. China's farm machinery power more than doubled from 2000 to 2015, with tractors and harvesters now ubiquitous in grain belts. In some regions, nearly 100% of wheat and corn fields are machine-harvested (Institute for Financial Management & Research, 2023). India's mechanisation rate remains lower; much of India's labour is still tied to manual transplanting or harvesting. China also pushed widespread use of improved inputs: fertilisers (despite environmental downsides) and high-yield seeds (especially rice hybrids) are standard. These intensive methods increased total factor productivity.

The effects on farm incomes have been significant. Chinese rural households saw sustained income growth: by 2024, per-capita disposable income in rural areas was ¥23,119(about $3,550) (National Bureau of Statistics of China, 2025). This reflects both farm earnings and off-farm

wages; more than 40% of rural income comes from non-agricultural jobs. In contrast, India's average per-capita farm household income (2018-19) was only ~₹127,000/year (≈$1,500). Thus, China's agricultural model lifted millions out of poverty faster (OECD, 2023). From the ACF view, China's coalition clearly prioritised economic growth, and its policies followed suit. However, China's gains had environmental and social costs. Heavy fertiliser use has caused soil degradation, and unchecked irrigation has stressed water tables (e.g., the North China Plain). Rapid rural–urban migration left some "ghost" villages, raising welfare issues for the elderly left behind. These side-effects have begun to shift Chinese policy; recent documents emphasise "green agriculture" and rural services. Still, the core outcome is that Chinese agriculture became far more productive, at the price of maybe later needing corrective policies.

3. Trade Outcomes and WTO Issues

China's role in world farm trade differs from India's. China is a net importer of several key commodities; it sources over 60% of global soybeans (for oil and feed), and it imports significant wheat and rice to supplement domestic needs under state quotas. Its exports in agriculture are mostly processed or manufactured goods (fruits, vegetables, seafood, and forestry products). In 2023, China's top agriculture-related exports were trunks/cases (~$33.5B) and furniture, reflecting its industrial capacity (Atlas of Economic Complexity, 2023). By contrast, China's exports of staples (e.g. grains, meat) are modest.

Trade policy reflects this; China uses high tariffs or quotas to shield its domestic grains, while liberalising imports for industrial inputs. Notably, a 2020 WTO challenge (DS517) found China's administration of its wheat and rice tariff-rate quotas was non-transparent, prompting reforms to allow more effective imports (World Trade Organization, 2019; OECD, 2023). China

has adhered to WTO rules on export subsidies (it does not subsidise exports)(Brink et al., 2019). In sum, China's model was inward-looking (ensuring self-sufficiency), whereas India's surplus-driven approach is more outward-looking (exporting grains when possible). ACF-wise, China's leadership coalition balanced export concerns by focusing on domestic stability, while India's coalition has at times sacrificed export competitiveness for high domestic prices.

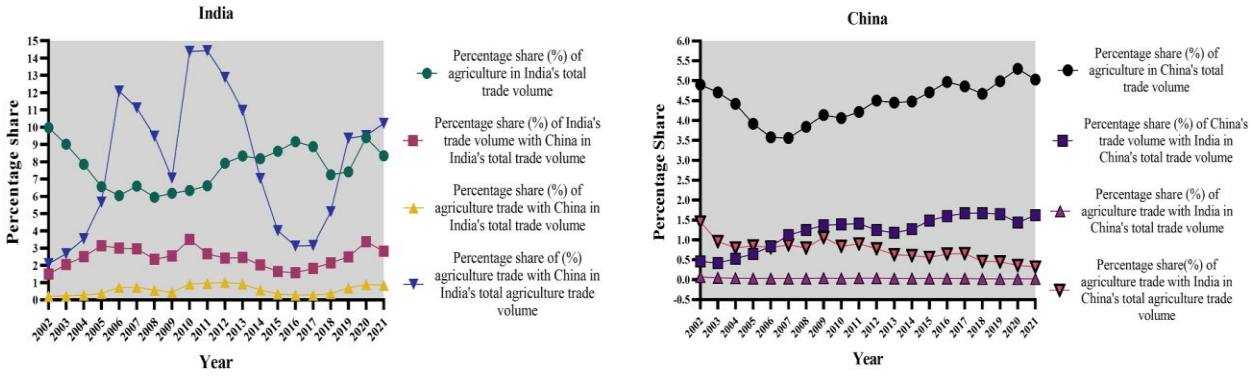

Figure 11. India–China bilateral trade and agricultural trade (2002–2021).*Source: UNCOMTRADE, via PLOS ONE.*

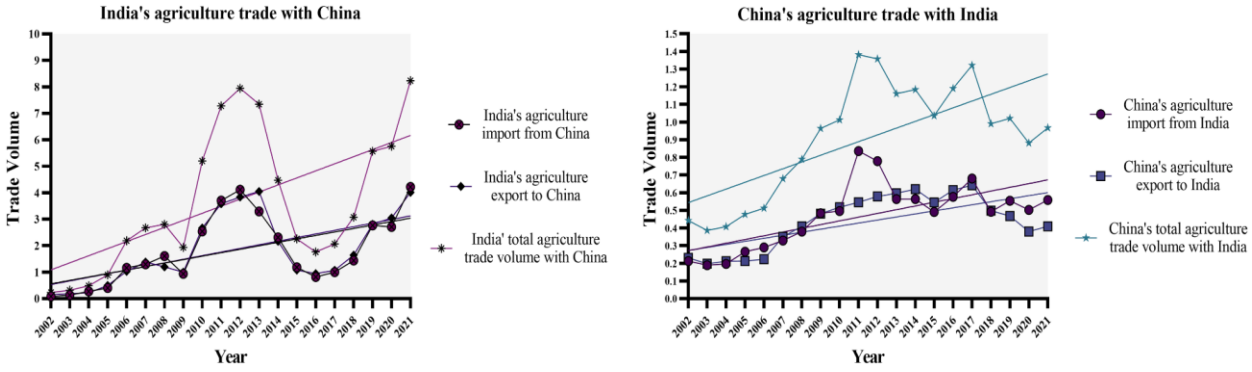

Figure 12. Share of agriculture and bilateral trade of India and China (2002–2021). *Source: UNCOMTRADE, via PLOS ONE.*

Year	World's total trade volume	India's total trade volume	India's % share in world's total trade volume	India's YoY growth rate	China's total trade volume	China's % share in world's total trade volume	China's YoY growth rate
2002	13045.612	107.551	0.824	-	620.766	4.758	-
2003	15214.684	131.791	0.866	5%	850.988	5.593	18%
2004	18511.303	174.885	0.945	9%	1154.555	6.237	12%
2005	20985.267	241.214	1.149	22%	1421.906	6.776	9%
2006	24257.174	299.413	1.234	7%	1760.397	7.257	7%
2007	27951.864	364.543	1.304	6%	2176.175	7.785	7%
2008	32408.668	497.573	1.535	18%	2563.255	7.909	2%
2009	25070.909	443.167	1.768	15%	2207.202	8.804	11%
2010	30440.761	570.438	1.874	6%	2973.766	9.769	11%
2011	36514.974	763.886	2.092	12%	3641.783	9.973	2%
2012	36924.815	778.541	2.108	1%	3866.981	10.473	5%
2013	37727.46	802.657	2.128	1%	4158.999	11.024	5%
2014	37795.744	776.914	2.056	-3%	4301.528	11.381	3%
2015	32988.29	655.126	1.986	-3%	3953.032	11.983	5%
2016	32001.263	617.032	1.928	-3%	3685.558	11.517	-4%
2017	35355.245	738.417	2.089	8%	4107.164	11.617	1%
2018	39000.627	830.108	2.128	2%	4620.045	11.846	2%
2019	37852.081	802.134	2.119	0%	4578.492	12.096	2%
2020	35212.59	643.469	1.827	-14%	4658.666	13.23	9%
2021	44530.764	965.216	2.168	19%	6046.665	13.579	3%
			AAGR	**5.579%**		**AAGR**	**5.785%**
			CAGR	**5.219%**		**CAGR**	**5.675%**

Source: Author's calculation based on the data sourced from UNCOMTRADE.

https://doi.org/10.1371/journal.pone.0294561.t001

Figure 13. India's and China's share in world trade (2002–2021).*Source: UNCOMTRADE, via PLOS ONE.*

4. Farmer Welfare and Income Effects

Chinese farmers have, on average, benefited greatly from the modernisation strategy. Rural incomes grew rapidly as productivity rose and off-farm jobs expanded. As noted, China's rural per capita disposable income (~$3,550 in 2024) is roughly double India's figure (National Bureau of Statistics of China, 2025). In welfare terms, China coupled its agricultural policies with broad social support, it phased out rural taxes, expanded pensions and healthcare, and targeted poverty alleviation programs (moving millions out of extreme poverty). This multi-pronged approach (subsidies + social programs) significantly improved rural living standards (OECD, 2023).

Compared to India, Chinese farmers had more diversified income sources and better safety nets. Even during price downturns, China subsidised inputs (seeds, fertiliser) and provided direct

payments. In contrast, India's support is heavily price-based, plus input subsidies (seeds, electricity). For example, India's procurement of rice in 2023 provided income to farmers, but in 2022, the state also shelled out ~$2.5 billion in free grain rations (PMGKAY) to support poor consumers, which indirectly stabilised farm prices(OECD, 2023). The Chinese coalition's goal was to raise absolute incomes; India's has been to prevent destitution.

Nonetheless, China's path isn't without equity issues. Coastal and large-farm regions gained more, and migration left some family farms small. Hence, China's current policies aim to bring neglected regions up to the same level. From a welfare standpoint, China's model delivered broader prosperity faster, while India's model delivered targeted protection to certain groups. Both countries now recognise gaps; India is slowly expanding MSP to pulses/oilseeds and enhancing rural employment schemes; China is focusing on green practices and balancing rural development.

Comparative Synthesis & Policy Recommendations

The ACF-driven comparison underscores a classic policy trade-off; India's security-oriented coalition ensured food stability but tolerated inefficiency, whereas China's development-oriented coalition achieved high output at a high resource cost. India's MSP has kept farmers' incomes above collapse levels, but over time, it has led to fiscal strains (food subsidies ~1% of GDP) and WTO tensions. China's modernisation generated massive yield growth and incomes, but only through enormous government spending and later subsidy retrenchment(OECD, 2023). Policy lessons can be drawn.

First, blend protection with productivity. India should continue protecting its poorest farmers (the spirit of MSP) but simultaneously invest heavily in technology transfer, irrigation,

and farm infrastructure – effectively "raising the ceiling" for farmers. China's successes suggest large public investments (e.g. subsidised machinery, R&D for seeds) that India can emulate.

Second, target support smartly. Instead of blanket MSP expansion, India could limit MSP to main staples or critical regions and use direct cash/income supports elsewhere. China's practice of pilot programs and region-specific support (e.g. model counties for mechanisation) implies that tailored interventions yield better results than one-size-fits-all (KPMG India, 2024; Hoefer, 2023).

Third, strengthen institutions and markets. Both countries would benefit from better market mechanisms. India needs stronger mandi reforms, e-NAM markets, and storage capacity so that farmers can find buyers beyond government procurement. China is liberalising land and markets; it should ensure smallholders gain secure land tenure and market access as farms consolidate. Forming coalitions that include farmers, traders, and technocrats can help guide these reforms.

Fourth, navigate WTO constraints. India and China should utilise their influence to advocate for WTO rule changes (e.g., adopting current base years for subsidy calculations or increasing the de minimis threshold for developing economies). Concurrently, each should reduce the most trade-distorting practices; for example, India could avoid exporting subsidised grain, and China has already shifted to green-box payments. Collaborative engagement (e.g. G33 coalition) will help align domestic priorities with global rules.

Finally, embed sustainability. Climate change and resource limits affect both. Future policies should condition support on sustainable practices. India could reward water-saving crops and techniques in its MSP scheme (it has begun promoting millets in dry regions), and China is already piloting pollution control in farming. In ACF terms, new advocacy coalitions (environmentalists + progressive farmers) must push to "green" the subsidy framework. In

summary, a hybrid approach is needed to protect farmers against hardship while driving productivity through investment and innovation. This requires building new coalitions of farmers, scientists, and policymakers to gradually reform each country's system in a politically feasible way. The other policy recommendations for India are:

a. Divergence of the input-based subsidy towards direct benefit: The PM Kisan Samman Nidhi/Ryuthu Bandhu value can be increased by removing fertiliser and free electricity, and irrigation.
b. India can learn from China and can subsidise machinery tools for agriculture that will increase the productivity of Farms.
c. There is a need for R&D in high-yielding seeds based on the Indian subcontinent climate.
d. The import and export of agricultural goods highlights the gap in production and market needs. There is a need for a Public-Private-Farmer partnership to bridge this gap. This will increase the farmer's income and the financial health of the country. Private entities can help farmers build storage facilities and a pre-contractual agreement.

Conclusion

India and China illustrate two ends of the agricultural policy spectrum. India's MSP-focused model has succeeded in ensuring foodgrain availability and shoring up farm incomes, but it has also produced inefficiencies, regional imbalances, and heavy subsidies. China's modernisation-focused model delivered dramatic gains in yield and rural incomes, but it depended on massive state intervention and later required adjustments to avoid trade conflicts. The ACF analysis shows that each country's dominant coalition pursued its core belief (social security versus productivity), leading to these trade-offs.

Going forward, each can learn from the other. India should retain MSP for critical staples to honour its safety-net goal, but also launch a concerted push for farm innovation and market efficiency (as China did). China, while maintaining its productivity drive, must continue making its system inclusive and environmentally sustainable. Ultimately, a balanced strategy combining India's farm welfare ethos with China's technology-driven development offers a path to resilient agriculture. If India and China build coalitions around both farm welfare and modernisation, they can secure their food supplies and farmers' livelihoods while complying with global trade rules. Their policy choices will not only shape their own rural futures but also influence global food security and markets for decades to come.

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Annexure 1

ACF stakeholders comparison table — India vs China

Below is a compact, ACF-style comparison table you can paste into your paper or appendix. Each row names a stakeholder/interest group and summarises their core beliefs/objectives, typical resources & strategies, and how they map onto the advocacy coalitions in India and China.

Stakeholder / Interest Group	India — role, core belief, resources & strategies	China — role, core belief, resources & strategies	ACF coalition alignment / likely influence
Central government & political leadership	Protect food security and political stability; electoral incentive to support farmers (MSP-friendly). Resources: legislation, budget, procurement (FCI), political patronage. Strategies: announce MSPs, food subsidies, export curbs/permits, political bargaining.	Prioritise productivity, self-reliance and stability; technocratic, top-down reform capacity. Resources: strong central control, fiscal power, policy instruments, pilot programs. Strategies: reallocate supports (direct payments, R&D investment), land-use reforms and mechanisation drives.	India: central player but constrained by federal politics — MSP/procurement coalition (high influence). China: dominant actor; leads a modernisation/technocratic coalition (very high influence).

Agricultural bureaucracy & procurement agencies (e.g., CACP, FCI)	Core belief: MSP + procurement necessary for buffer stocks and PDS. Resources: administrative reach, procurement networks, pricing recommendations. Strategies: implement procurement, provide technical reports (CACP), collect data used politically.	Ministries (Agriculture, Finance) prioritise productivity and technical fixes. Resources: program design, subsidies, research funding, pilot implementation. Strategies: deploy mechanisation programs, R&D funding, adjust supports in response to WTO rulings.	India bureaucracy reinforces MSP coalition (high). China bureaucracy implements centre's modernisation agenda (high, technocratic).
Farmers' unions / peasant organisations	Core belief: guaranteed prices and procurement secure livelihoods; risk-averse. Resources: mass mobilisation, electoral pressure (especially in procurement states). Strategies: protests, alliance with regional	Rural producers less unified nationally; local cooperatives/collective actors often align with state programmes. Resources: local leverage via township governments; limited overt national protest given political context. Strategies: participate in	India: key member of pro-MSP coalition (very high influence). China: generally incorporated into state programmes (medium influence), less oppositional.

	parties, media campaigns (e.g., 2020–21 protests).	pilots, adopt state-promoted tech when incentivised.	
State / provincial governments & regional politicians	Regional politics (Punjab, Haryana, etc.) strongly defend procurement and MSP. Resources: control of local procurement execution, political alliances. Strategies: mobilise constituencies, resist centre reforms that threaten local benefits.	Provincial/local cadres execute central policies; where local priorities differ, they adapt implementation (e.g., land consolidation pilots). Resources: implementation discretion; incentives tied to targets. Strategies: pilot programmes, scale-up of successful models.	India: crucial to maintaining MSP status quo (high, especially in surplus states). China: implementers and local innovators within central coalition (medium–high).

Agribusiness / input suppliers (fertiliser, seed, machinery)	Generally favour predictable price regimes and subsidies that sustain demand; push for market access for inputs. Resources: finance, lobbying, supply chains. Strategies: lobbying for input subsidies, credit schemes, public–private partnerships.	Strong state-linked firms and private conglomerates that benefit from mechanisation and processing. Resources: scale, state contracts, export capability. Strategies: partner in state pilots, industrialise processing, push for consolidation.	Both countries: part of pro-productivity coalition in China; in India they straddle pro-MSP and reform coalitions (medium influence).
Research institutions / technocrats (agri universities, experts)	Mixed: some push productivity/market reforms; others support food security framework. Resources: evidence, policy advice, CACP reports. Strategies: policy briefs, technical recommendations, capacity building.	Strong influence; technocrats drive R&D, hybrid seeds, mechanisation policy and pilot design. Resources: state funding, research networks, implementation links. Strategies: design and scale technical solutions; advise central leadership.	India: source of evidence for reform but weaker political leverage (medium). China: core part of modernisation coalition (high).

Trade & export interests (processors, traders, exporters)	Exporters of rice/wheat benefit from surpluses but are affected by export bans and unpredictable policy. Resources: commercial networks, logistics. Strategies: lobby for stable trade rules, seek export incentives.	China's export interests centre on processed and high-value agri products; importers (e.g., soy) influential on policy. Resources: large processing industry, state trading firms. Strategies: engage in tariff/quota negotiations, partner with state import arrangements.	India: aligned with surplus/export windows but constrained by MSP/stock policy (medium). China: integrated with state industrial/trade policy (medium–high).
Financial institutions & credit providers	Public banks & co-operatives provide credit, risk-averse, given smallholders. Resources: credit products, subsidies via credit schemes. Strategies: support input finance; interact with PM-KISAN and insurance programs.	State and commercial banks finance consolidation and mechanisation; stronger rural finance systems linked to land-use reforms. Strategies: finance leasing for machinery, support agribusiness scale-ups.	India: limited ability to transform agriculture alone (low–medium). China: important enabler of consolidation and mechanisation (medium–high).

Civil society, environment & consumer groups	Increasingly critical of unsustainable practices (water depletion, soil degradation) and of MSP regressivity; resources: advocacy, research, media. Strategies: campaigns, litigation, push for 'green' reforms and targeting.	Environmental concerns recognised but often secondary to productivity; recent policy shifts emphasise green agriculture. Resources: limited independent advocacy at national scale. Strategies: feed into pilot green policies, sometimes academic partnerships.	India: rising challenger coalition (environmental + progressive reformers) with growing voice (medium). China: quieter public voice but growing within state policy discourse (medium).
Consumers / urban constituencies	Interest in stable, low food prices (urban voters) can push government to restrict exports or subsidise food. Resources: electoral weight, media attention. Strategies: influence government via demand for price stability and PDS.	Urban consumers influence policy indirectly through social stability concerns; state balances rural protection with urban price stability. Strategies: central planning to avoid social unrest.	India: urban pressure can produce short-term export curbs, reinforcing domestic protection (medium). China: factored into central planning, less pluralistic pressure (medium).