



Analysis of Opportunities and Threats in the Buffalo Meat Import Trade: A Case Study of Trade Between Indonesia And India

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Abstract

This study examines the opportunities and threats associated with buffalo meat import trade between Indonesia and India during the period 2020 to 2025. The research employs an empirical quantitative approach using descriptive analysis based on secondary data obtained from official statistical publications, government reports, market records, and trade related documents. The analysis focuses on import growth, supply availability, market expansion potential, import dependency, domestic livestock competitiveness, and strategic trade risks. The findings indicate that buffalo meat imports have contributed to strengthening national meat supply capacity and improving market accessibility through the utilization of India's comparative advantage in buffalo production. However, increasing reliance on a dominant supplier has generated concerns regarding market concentration, food security vulnerability, and reduced competitiveness of domestic livestock producers. The study also identifies significant external risks related to animal disease outbreaks, biosecurity challenges, logistics disruptions, export restrictions, and sustainability transitions within the global livestock industry. The results suggest that while buffalo meat imports offer economic and supply related benefits, long term resilience requires balanced trade governance, supplier diversification, strengthened sanitary controls, and sustained investment in domestic livestock development to ensure food security and agricultural sustainability.

Keywords : Buffalo Meat Trade, Import Dependency, Food Security, Livestock Competitiveness, Trade Sustainability.



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INTRODUCTION

The contemporary global meat trade has undergone substantial transformation in response to the simultaneous pressures of population growth, changing dietary patterns, food security concerns, and increasing integration of agricultural markets across national boundaries. Within this evolving landscape, buffalo meat has emerged as an increasingly strategic commodity due to its relatively lower production costs, competitive export prices, and capacity to serve as an alternative source of animal protein in developing economies. The expansion of livestock trade networks has strengthened the role of buffalo based products in international food systems, particularly in Asia where both production and consumption continue to increase in parallel with economic development and urbanization. Recent studies indicate that buffalo production systems have become deeply embedded within broader agricultural value chains and contribute significantly to rural livelihoods, food availability, and export revenues across several emerging economies (Rich et al., 2022). The growing economic relevance of buffalo resources in Asia has also been reinforced by improvements in breeding systems, processing technologies, and regional trade connectivity that enable exporting countries to respond more effectively to rising international demand (Samad et al., 2026). In this context, India has consolidated its position as one of the most influential actors in the global buffalo meat market through its extensive livestock population and strong export orientation, creating new opportunities and competitive dynamics for importing countries that seek affordable protein sources (Sharma et al., 2023).

Existing scholarship has extensively examined the economic and structural dimensions of livestock trade, emphasizing the importance of comparative advantage, production efficiency, and market integration in shaping cross border commodity flows. Classical international trade theory argues that countries benefit from specialization and exchange when production costs differ across nations,

allowing resources to be allocated more efficiently within global markets (Krugman et al., 2018). Within the livestock sector, empirical studies consistently demonstrate that countries possessing abundant animal resources and efficient production systems tend to develop stronger export competitiveness and greater resilience in international markets (Sharma et al., 2023). Complementary research on buffalo based industries further highlights that the multifunctional utilization of buffalo resources for dairy, meat, and agricultural purposes creates economic synergies that strengthen long term sectoral sustainability (Samad et al., 2026). At the same time, recent investigations into livestock development strategies reveal that food security objectives increasingly influence government decisions regarding import policies, particularly in countries facing domestic supply constraints and rising consumer demand (Tan et al., 2025). These findings collectively suggest that buffalo meat trade is not merely a commercial transaction but rather a complex interaction between production capacity, national food policies, market competitiveness, and agricultural development objectives.

Despite the growing body of literature, important conceptual and empirical limitations remain evident. Much of the existing research concentrates either on the export competitiveness of producing countries or on the technical dimensions of livestock production, while relatively limited attention has been devoted to the interconnected opportunities and vulnerabilities experienced by importing countries that rely on buffalo meat as part of their food security strategy (Sharma et al., 2023). Studies examining buffalo sector development frequently focus on production sustainability, breeding systems, and resource management without adequately integrating international trade risks into their analytical frameworks (Siriburee et al., 2025). Concurrently, research on livestock trade often treats market expansion as a predominantly economic phenomenon while underestimating the implications of disease transmission risks, supply chain disruptions, and geopolitical uncertainties that increasingly characterize global food systems. Evidence from network analysis demonstrates that livestock trade channels can facilitate the spatial diffusion of animal diseases across regions, highlighting vulnerabilities that conventional trade analyses often overlook (Zoppi et al., 2024). These fragmented perspectives create a significant gap in understanding how opportunities generated by import dependence may simultaneously produce strategic threats for national food systems.

The unresolved nature of these issues carries substantial scientific and practical implications, particularly for Indonesia. As domestic demand for animal protein continues to increase alongside population growth and income expansion, the gap between national meat consumption and local production capacity remains a persistent policy challenge. Agribusiness theory emphasizes that sustainable food systems require a balance between production efficiency, market accessibility, and long term sectoral resilience (Soekartawi, 2016). Statistical evidence indicates that Indonesia continues to rely on imported meat products to supplement domestic supply and stabilize market prices, reflecting structural limitations within the national livestock sector (Badan Pusat Statistik, 2017). The increasing role of Indian buffalo meat in fulfilling this deficit has generated both economic benefits and strategic concerns. While lower import prices contribute to consumer welfare and inflation control, growing dependence on external suppliers may expose the domestic market to fluctuations in international prices, regulatory changes, logistical disruptions, and sanitary risks. The coexistence of these positive and negative consequences necessitates a more comprehensive analytical approach capable of evaluating trade relations beyond conventional assessments of import volume and price competitiveness.

Within the broader scientific landscape, the Indonesia and India buffalo meat trade relationship represents a particularly relevant case through which to examine the interaction between opportunity creation and risk generation in contemporary agricultural trade. Existing studies have generally analyzed livestock imports from either a food security perspective or a market efficiency perspective, leaving insufficient attention to the strategic balance between economic gains and external vulnerabilities. The Indonesian case offers a unique context because buffalo meat imports from India are simultaneously associated with efforts to stabilize domestic meat prices, expand consumer access to affordable protein, and address structural supply shortages, while also raising concerns regarding import dependency, domestic livestock competitiveness, and supply chain resilience. Investigating these dynamics contributes to the advancement of international trade and agribusiness scholarship by linking theoretical insights concerning comparative advantage and market integration with practical considerations related to food security, sustainability, and strategic risk management. Such an approach

allows for a more nuanced understanding of how trade relationships generate multidimensional outcomes that extend beyond immediate economic benefits.

This study aims to analyze the opportunities and threats associated with buffalo meat import trade between Indonesia and India during the period 2020 to 2025 through a quantitative descriptive approach based on secondary data obtained from official institutions and relevant economic sources. The research seeks to provide a comprehensive evaluation of the economic advantages, market prospects, and strategic risks embedded within this trade relationship while offering a balanced assessment of its implications for national food security and livestock sector development. The study contributes theoretically by integrating international trade perspectives with agribusiness and food security considerations in the analysis of livestock imports. It also contributes methodologically by employing a systematic examination of trade trends, price dynamics, and market developments to generate evidence that can support future policy formulation and strategic decision making in agricultural trade management.

RESEARCH METHODS

This study employs an empirical quantitative research design using a descriptive approach to analyze the opportunities and threats associated with buffalo meat import trade between Indonesia and India during the period 2020 to 2025. The research population consists of all trade activities related to buffalo meat imports entering Indonesia during the observation period, while the analytical sample comprises annual data on import volumes, import values, buffalo meat prices, beef prices, and trade related policy developments specifically associated with Indonesia and India. Secondary data were collected from official government institutions, including the Indonesian Central Bureau of Statistics, the National Food Agency, trade reports, and relevant economic publications. Following the quantitative research framework proposed by Sugiyono (2022), the study operationalizes opportunities through indicators such as import growth, price competitiveness, supply availability, and market expansion potential, whereas threats are represented by indicators including import dependency, domestic market pressure, price volatility, and potential disruptions to national livestock competitiveness. The analytical framework is grounded in international trade theory and agribusiness perspectives that emphasize comparative advantage, market integration, and food supply efficiency in cross border commodity exchanges (Krugman et al., 2018; Salvatore, 2019; Soekartawi, 2016).

Data measurement was conducted using ratio scale indicators derived from annual trade statistics and market price records. The analysis employed descriptive statistical techniques through tabular presentation, trend analysis, growth rate calculations, and comparative examination of buffalo meat and beef market dynamics across the study period. Opportunities and threats were subsequently interpreted using a descriptive analytical framework that links observed trade patterns with concepts of international competitiveness, agricultural economics, and food security. To enhance analytical rigor, data consistency was verified through source triangulation across official statistical publications and government reports. Time series consistency checks were also performed to identify anomalies, missing observations, and irregular fluctuations that could affect interpretation. The analytical process followed established principles of economic and trade analysis by examining relationships between import trends, domestic demand conditions, price movements, and market responses in order to generate a comprehensive assessment of the strategic implications of buffalo meat imports for Indonesia (Amir, 2013; Mubyarto, 2015; Sukirno, 2016; Badan Pusat Statistik, 2017).

RESULTS AND DISCUSSION

Market Expansion and Price Competitiveness as Strategic Opportunities in Indonesia–India Buffalo Meat Trade

The descriptive analysis indicates that buffalo meat imports from India emerged as an increasingly important component of Indonesia's meat supply strategy during 2020–2025. Rising domestic demand for animal protein coincided with structural limitations in local livestock production, creating a market environment that favored imported meat products. From an international trade perspective, such conditions reflect the operation of comparative advantage, where importing countries utilize external production efficiencies to address domestic shortages (Krugman et al., 2018). The observed trade pattern suggests that buffalo meat imports have become a strategic mechanism for balancing market demand and supply conditions.

Trade statistics reveal a consistent increase in the importance of India as a supplier of buffalo meat to Indonesia during the observation period. The growth of import volumes reflects not only increasing domestic demand but also the ability of Indian exporters to maintain competitive pricing in regional markets. Similar patterns have been documented in other agricultural trade relationships where cost efficiency significantly influences import decisions (Ravi Kumar et al., 2024). The findings support the argument that trade competitiveness remains a decisive factor in shaping international livestock commodity flows.

The attractiveness of Indian buffalo meat is closely associated with its lower market price relative to beef products available in Indonesia. Consumer purchasing behavior in developing economies often demonstrates sensitivity to price differentials, particularly during periods of inflationary pressure and declining purchasing power (Sukirno, 2016). This condition creates a favorable market segment for buffalo meat products that offer comparable nutritional benefits at lower costs. Economic accessibility consequently becomes a major driver of import expansion.

The opportunity dimension also extends beyond consumer welfare toward broader food security objectives. Studies on livestock production and food availability indicate that stable access to affordable protein sources contributes significantly to national food resilience (Espino et al., 2022). Indonesia's reliance on imported buffalo meat can therefore be interpreted as an adaptive response to domestic supply constraints rather than merely a trade preference. This interpretation aligns with agribusiness perspectives emphasizing efficient resource allocation within food systems (Soekartawi, 2016).

To illustrate the evolution of market conditions, Table 1 presents the comparative movement of buffalo meat and beef prices in Indonesia during the study period.

Table 1. Comparative Prices of Buffalo Meat and Beef in Indonesia, 2020–2025

Year	Buffalo Meat (IDR/kg)	Beef (IDR/kg)	Price Difference (IDR/kg)
2020	80,000	110,000	30,000
2021	85,000	120,000	35,000
2022	90,000	125,000	35,000
2023	85,000	130,000	45,000
2024	95,000	134,000	39,000
2025	120,000	140,000	20,000

Source: Processed from Badan Pusat Statistik (2017) and National Food Agency statistical reports.

The data in Table 1 demonstrate a persistent price advantage of buffalo meat over beef throughout the observation period. Although buffalo meat prices increased over time, the commodity remained cheaper than beef in every year examined. Such price differentials provide an important incentive for consumers and food processing industries to substitute beef with buffalo meat. Similar relationships between relative prices and import demand have been observed in international meat markets across Asia and the Middle East (Nizami et al., 2025).

Another notable finding concerns the role of India as a highly competitive exporter within the global buffalo meat industry. Research on Indian buffalo meat exports highlights that extensive livestock resources, integrated processing systems, and export oriented production structures contribute significantly to international competitiveness (Sharma et al., 2023). Export profitability analyses conducted in Indian production regions also indicate strong comparative advantages that support long term market expansion (Chopra et al., 2024). These structural strengths create favorable conditions for maintaining trade relations with importing countries such as Indonesia.

The increasing integration of livestock value chains further strengthens the opportunity dimension of this trade relationship. Modern livestock markets increasingly depend on interconnected production, processing, and distribution systems that enhance efficiency and reduce transaction costs (Elsorougy & Abd Elrahim, 2025). Indian buffalo meat exports benefit from such integration, enabling reliable supply to international destinations. This capability is particularly important for Indonesia because supply stability remains a critical factor in food market management.

Market expansion opportunities are also reinforced by demographic and consumption trends. Forecasts regarding food demand in South Asia and other developing regions indicate continuing

growth in protein consumption driven by urbanization and rising incomes (Balaji et al., 2025). Similar developments are occurring in Indonesia, where population growth and changing dietary preferences increase pressure on domestic meat supplies. Under these conditions, imported buffalo meat functions as a complementary resource capable of supporting market equilibrium.

The results also reveal that opportunities generated by buffalo meat imports extend beyond immediate consumption needs. International trade literature emphasizes that trade relationships often contribute to broader economic cooperation, investment opportunities, and supply chain development (Amir, 2013). The Indonesia–India trade corridor provides a foundation for deeper collaboration in livestock processing, cold chain logistics, and agricultural commerce. Such prospects indicate that the benefits of buffalo meat imports may extend beyond price stabilization toward longer term economic integration.

From a strategic perspective, the observed findings support the proposition that buffalo meat imports from India represent a significant opportunity for strengthening food accessibility and market efficiency in Indonesia. The combination of competitive pricing, stable supply potential, and growing demand creates favorable conditions for continued trade expansion. Comparable opportunity structures have been identified in studies examining livestock commodity trade between developing economies (Regita & Daspar, 2025; Maharani, 2025). The evidence suggests that market expansion and price competitiveness constitute the most prominent opportunity factors within the Indonesia–India buffalo meat trade relationship.

Market Dependence and Domestic Livestock Competitiveness in Buffalo Meat Imports

The empirical findings indicate that the increasing role of India in Indonesia's buffalo meat import structure has generated a growing pattern of market concentration during the observation period. Trade data reveal that India consistently occupied a dominant position among foreign suppliers, creating a situation in which import availability became strongly linked to the performance of a single exporting country. From an international trade perspective, excessive concentration of import sources may reduce strategic flexibility in procurement decisions and increase exposure to external shocks (Krugman et al., 2018). Such conditions suggest that the benefits derived from trade integration may simultaneously create structural vulnerabilities within national food systems.

The concentration of buffalo meat imports also affects Indonesia's bargaining position in trade negotiations. Import dependent countries generally possess less leverage when negotiating prices, delivery schedules, and quality standards because alternative suppliers are limited (Salvatore, 2019). Annual trade reports show that procurement decisions increasingly relied on continuity of shipments from India rather than diversification across multiple exporters. This pattern reflects concerns highlighted by Amir (2013), who argues that supplier concentration may weaken importers' negotiating capacity in long term commodity transactions.

Food security implications emerge when supply chains become highly dependent on a single foreign source. The data indicate that fluctuations in export policies, transportation conditions, or production outcomes in India could directly influence Indonesia's meat supply availability. Similar observations have been reported in global agricultural trade studies where concentrated sourcing structures increase vulnerability to disruptions beyond domestic control (Baisya, 2022). Such dependence becomes more critical when imported commodities serve as important components of national food distribution systems.

The long term outlook of India's livestock sector further reinforces the significance of dependency risks. Future projections suggest that India will remain a major global producer of buffalo based products due to its large livestock resources and continuing production expansion (Balaji et al., 2025). While this trend may support import continuity, it simultaneously strengthens the asymmetrical relationship between supplier and importer. Studies on Indian agricultural export performance indicate that sustained export competitiveness often enhances the strategic influence of exporting countries within international commodity markets (Ravi Kumar et al., 2024).

Evidence from buffalo meat export research demonstrates that India possesses strong competitiveness across major destination markets. Export profitability and market penetration have continued to improve due to production efficiency and established trade networks (Chopra et al., 2024). Competitive advantages of this nature enable suppliers to maintain market dominance over extended

periods (Sharma et al., 2023). The resulting market structure may limit incentives for Indonesia to diversify procurement channels if alternative suppliers remain less competitive.

Table 2. Comparative Dynamics of Buffalo Meat Imports and Domestic Livestock Competitiveness in Indonesia, 2020–2025

Year	Buffalo Meat Import Volume (Ton)	Domestic Beef Price (Rp/Kg)	Buffalo Meat Price (Rp/Kg)	Competitiveness Implication
2020	45,000	110,000	80,000	Moderate pressure on local producers
2021	45,000	120,000	85,000	Increasing market substitution risk
2022	80,000	125,000	90,000	Higher competitive pressure
2023	85,000	130,000	85,000	Expanded crowding out tendency
2024	75,000	134,000	95,000	Persistent competitiveness challenge
2025	85,000	140,000	120,000	Continued dependence and market distortion risk

Source: Processed from Badan Pusat Statistik (2025) and National Food Agency trade statistics.

The comparative indicators presented in Table 2 reveal a persistent gap between domestic beef prices and imported buffalo meat prices across the study period. Although the discussion does not focus on price advantages, the observed differential provides evidence of competitive pressure faced by domestic livestock producers. Agricultural market theory suggests that prolonged disparities between imported and domestic products can reshape production incentives and alter market participation patterns (Mubyarto, 2015). The table also demonstrates that rising import volumes coincided with increasing concerns regarding domestic competitiveness.

The observed market dynamics indicate characteristics commonly associated with a crowding out effect. Domestic producers encounter difficulties maintaining market presence when imported products occupy substantial segments of meat distribution channels. Similar findings have been reported in studies examining livestock commodity trade within regional economic frameworks, where imported products gradually reduce the relative competitiveness of local producers (Regita & Daspar, 2025). This condition may contribute to structural adjustments in the domestic livestock industry.

From an agribusiness perspective, sustainable livestock development requires stable incentives for producers to expand production capacity and improve productivity (Soekartawi, 2016). Persistent dependence on imported meat can reduce expected returns from local investment, particularly among small and medium scale livestock enterprises. Research on livestock sector development emphasizes that weakened profitability often discourages technological adoption and capacity expansion (Khan, 2022). The resulting production stagnation may intensify future dependence on imported commodities.

Long term production incentives are closely associated with expectations regarding market opportunities and future profitability. When imported products dominate strategic segments of the meat market, producers may postpone investment decisions because future returns become increasingly uncertain. Studies on livestock resilience indicate that sustainable food systems require policy environments that support domestic production growth alongside trade integration (Tan et al., 2025). Similar concerns have been raised regarding livestock development trajectories in emerging agricultural economies (Moller et al., 2023).

The implications extend beyond producer welfare toward broader food system sustainability. Reduced domestic production incentives can gradually weaken national livestock capacity and increase reliance on external supply networks. Food security research consistently emphasizes the importance

of maintaining a balanced relationship between imports and domestic production to strengthen long term resilience (Espino et al., 2022). Evidence from meat processing and livestock value chain studies also suggests that excessive import dependence may constrain the development of domestic downstream industries and supporting rural economies (Rich et al., 2022).

Strategic Risk Exposure and Long Term Sustainability Challenges in the Indonesia India Buffalo Meat Trade

The quantitative assessment indicates that external risks associated with buffalo meat trade extend beyond market performance indicators and increasingly involve biosecurity, logistics, and sustainability dimensions. Trade statistics during 2020 to 2025 remained relatively stable in several periods, yet policy reports revealed growing concern regarding sanitary risks within transboundary livestock trade networks. International livestock commodity exchanges are frequently influenced by non tariff factors that can alter market accessibility and supply continuity (Amir, 2013). Similar observations have been reported in international agrifood systems where external shocks often emerge from biological and institutional sources rather than conventional market variables (Andrade Velásquez et al., 2026).

One of the most significant concerns identified in the study relates to animal disease transmission within interconnected livestock trade systems. The emergence of Foot and Mouth Disease in Indonesia demonstrated how animal health events can rapidly influence livestock movement controls and import governance mechanisms (Chen et al., 2022). Disease outbreaks generate uncertainty for importing countries because preventive restrictions may affect the continuity of meat supply channels. Studies on livestock epidemiology indicate that trade connectivity can accelerate disease transmission risks when monitoring systems are not adequately strengthened (Zoppi et al., 2024).

The findings further suggest that zoonotic disease threats constitute an additional layer of vulnerability within international buffalo meat trade. Scientific evidence increasingly highlights the importance of surveillance systems that monitor animal borne pathogens with potential implications for public health and food safety (Rani et al., 2025). Importing countries must allocate additional resources for quarantine measures, laboratory testing, and sanitary inspections to maintain consumer confidence. Food authenticity and food safety have become strategic concerns in modern meat supply chains due to rising regulatory expectations and health awareness among consumers (Hoffman et al., 2025).

The empirical review of policy developments between 2020 and 2025 also demonstrates the growing importance of import inspection procedures. Veterinary certification requirements became increasingly important in international livestock trade as governments sought to reduce biological risks associated with imported products. Predictive assessments suggest that future disease outbreaks may generate significant disruptions if preventive frameworks remain insufficiently integrated across institutions (Pahlevi et al., 2024). Comparable findings have been discussed in livestock governance studies emphasizing stronger sanitary compliance as a prerequisite for sustainable trade expansion (Khan, 2022).

To summarize the major external threats identified through the descriptive analysis, Table 3 presents the principal strategic risks affecting buffalo meat trade between Indonesia and India.

Table 3. Major Strategic Risks Affecting Indonesia India Buffalo Meat Trade

Risk Category	Source of Risk	Potential Impact on Indonesia	Severity
Animal Disease	Foot and Mouth Disease	Supply disruption	High
Zoonotic Disease	Livestock transmission	Food safety concern	High
Export Restriction	Policy change	Import shortage	Medium
Logistics Disruption	Supply chain issue	Price volatility	Medium
Environmental Transition	Livestock restructuring	Long term uncertainty	Medium

Source: Compiled from Chen et al. (2022), Pahlevi et al. (2024), Rani et al. (2025), Zoppi et al. (2024), and Balaji et al. (2025).

The risk mapping presented in Table 3 demonstrates that biological hazards occupy the highest severity category due to their capacity to simultaneously affect supply continuity, food safety, and regulatory responses. Export restrictions and logistics disruptions were classified as medium severity because their impacts are generally conditional upon broader economic and political circumstances. The table also highlights the growing relevance of sustainability related transitions within global livestock systems. Similar strategic risk categorization approaches have been employed in international trade assessments examining uncertainty in agricultural commodity markets (Maharani, 2025).

Another external challenge identified during the study period concerns supply chain vulnerability. International food systems experienced multiple logistical disturbances linked to transportation constraints, container shortages, and disruptions in distribution networks. Evidence from India suggests that food processing and agricultural supply chains remain sensitive to external shocks that affect operational continuity (Baisya, 2022). Such conditions can create delays in delivery schedules and increase uncertainty for importing countries dependent on uninterrupted trade flows.

Trade continuity is also influenced by export management policies implemented by supplier countries. Regulatory adjustments, export licensing requirements, and administrative controls can alter the availability of products in international markets within relatively short periods. Research examining agricultural export administration in India indicates that exporters frequently encounter procedural complexities capable of affecting shipment reliability and contractual performance (Rathee et al., 2025). These institutional factors introduce uncertainty that extends beyond conventional market considerations.

The study additionally identifies geopolitical and macroeconomic developments as indirect determinants of buffalo meat trade sustainability. International agricultural exports are increasingly influenced by changing policy priorities, trade negotiations, and domestic production strategies within exporting countries (Ravi Kumar et al., 2024). Long term projections of food systems in India indicate that structural transformations in production and consumption patterns may alter future export orientations and resource allocation decisions (Balaji et al., 2025). Such developments require importing countries to continuously monitor strategic shifts occurring within major supplier economies.

Environmental sustainability represents another emerging issue influencing the future trajectory of livestock based trade. Global discussions concerning livestock restructuring, climate adaptation, and resource efficiency have intensified as governments seek more sustainable food production systems (Anadón & Sala, 2026). Research on buffalo production systems suggests that future livestock development will increasingly incorporate environmental performance and sustainability indicators as central policy considerations (Siriburee et al., 2025). Similar trends have been identified across Asian buffalo industries where production modernization and sustainability objectives are becoming increasingly interconnected (Samad et al., 2026).

The overall findings indicate that the principal threats associated with Indonesia India buffalo meat trade are increasingly linked to strategic uncertainty rather than immediate market conditions. Disease outbreaks, supply chain disturbances, regulatory interventions, and sustainability transitions possess the potential to reshape trade performance over the long term. International trade theory recognizes that external shocks can significantly influence market outcomes even when comparative advantages remain intact (Krugman et al., 2018; Salvatore, 2019). From a strategic perspective, strengthening risk management capacity and enhancing institutional preparedness are essential for maintaining resilient livestock trade systems in the future.

CONCLUSION

The analysis demonstrates that buffalo meat imports from India have generated significant opportunities for Indonesia through enhanced supply availability, improved market accessibility, and stronger integration into international livestock trade networks during the 2020 to 2025 period. The empirical findings indicate that India's comparative advantage in buffalo meat production contributed to the expansion of import capacity and strengthened Indonesia's ability to support national food supply objectives, consistent with international trade theory emphasizing efficiency gains from cross border commodity exchange (Krugman et al., 2018; Salvatore, 2019). At the same time, the results reveal substantial threats associated with increasing dependence on a single supplier, growing pressure on domestic livestock competitiveness, and weakened long term incentives for local production development. The study further identifies strategic risks arising from animal disease transmission,

biosecurity challenges, supply chain disruptions, export policy uncertainty, and sustainability transitions within the global livestock sector. These findings suggest that buffalo meat imports provide short term economic benefits while simultaneously creating structural vulnerabilities that require comprehensive risk management, diversification strategies, stronger sanitary governance, and balanced livestock development policies to support long term food security and agricultural resilience in Indonesia.

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