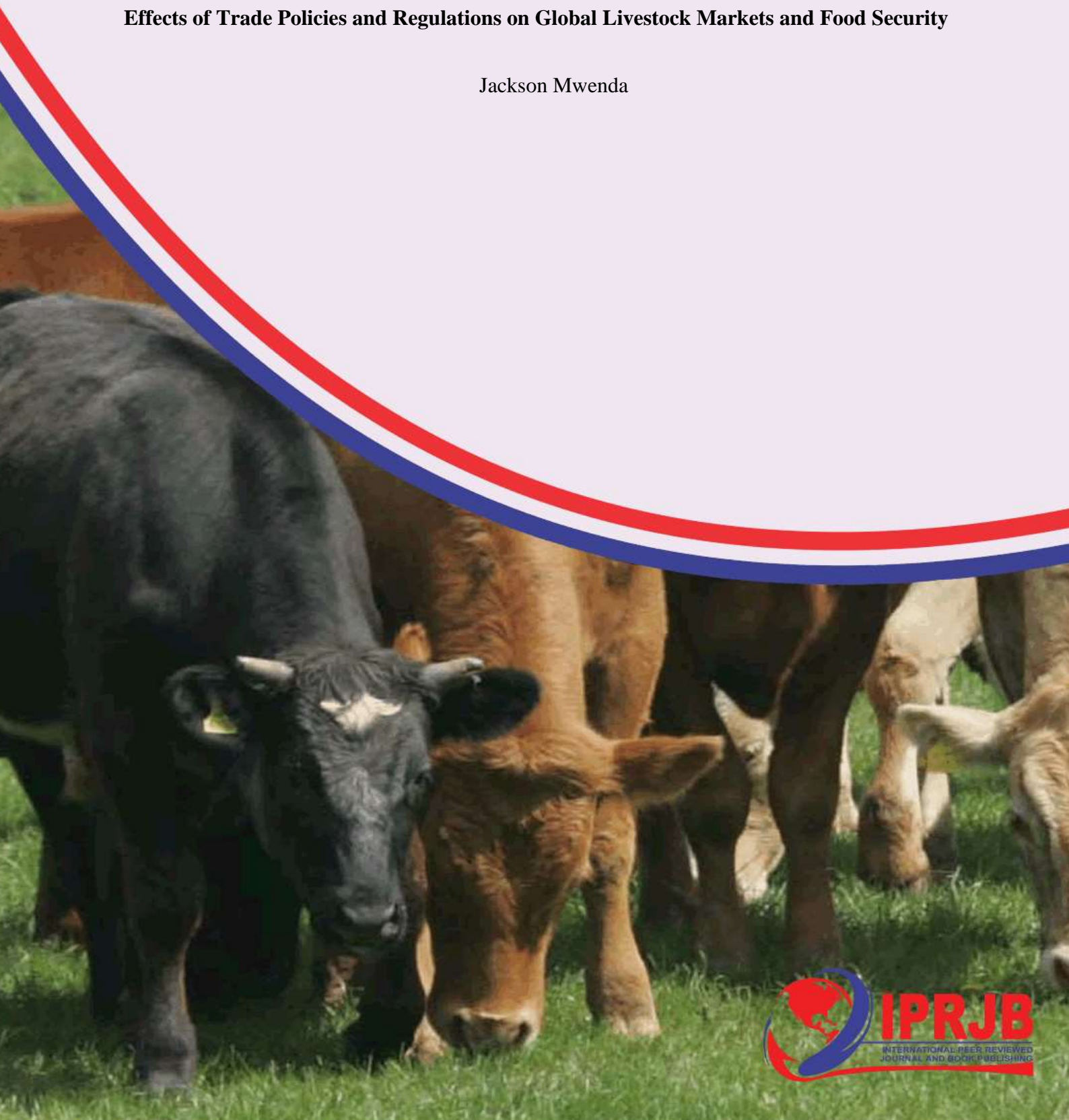



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Effects of Trade Policies and Regulations on Global Livestock Markets and Food Security

Jackson Mwenda



Effects of Trade Policies and Regulations on Global Livestock Markets and Food Security in Kenya

 Jackson Mwenda
Egerton University

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Abstract

Purpose: The aim of the study was to examine the effects of trade policies and regulations on global livestock markets and food security in Kenya.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: The study revealed that the effects of trade policies and regulations on global livestock markets and food security in Kenya underscore the intricate interplay between local agricultural systems and international trade dynamics. Trade policies, including tariffs, quotas, and sanitary and phytosanitary (SPS) measures, significantly influence Kenya's livestock sector by shaping market access, competitiveness, and domestic production levels. While trade liberalization measures may enhance market opportunities and foster economic growth, they also pose challenges to local farmers and food security by exposing them to international competition and market fluctuations.

Unique Contribution to Theory, Practice and Policy: New Trade Theory & Institutional Theory may be used to anchor future studies on effects of trade policies and regulations on global livestock markets and food security in Kenya. Efforts should be made to enhance the transparency, coherence, and consistency of trade policies and regulations related to livestock markets. There is a need to adopt a balanced approach that promotes trade while safeguarding food security and sustainable development goals. Policymakers should prioritize measures that enhance the resilience and competitiveness of domestic livestock producers, particularly small-scale farmers and vulnerable communities. This could involve targeted support programs such as access to credit, technical assistance, and market information, aimed at improving productivity, market access, and income generation.

Keywords: *Trade Policies, Regulations, Global Livestock Markets, Food Security*

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INTRODUCTION

Global livestock markets play a crucial role in ensuring food security by providing a significant source of protein for human consumption worldwide. According to a study by Thornton (2018), the demand for livestock products is expected to increase substantially in the coming years due to population growth, rising incomes, and urbanization. Developed economies such as the United States and Japan exemplify this trend. In the United States, for instance, the livestock sector contributes significantly to the agricultural economy, with meat consumption per capita steadily increasing over the years. From 2000 to 2020, per capita meat consumption in the United States rose from approximately 221 pounds to 225 pounds per year, indicating a consistent demand for livestock products (USDA, 2021). Similarly, in Japan, despite a declining population, per capita meat consumption has been on the rise, driven by changing dietary preferences and increasing demand for high-quality meat products (FAO, 2019).

In developing economies, livestock markets also play a critical role in food security and economic development. For instance, in countries like China and India, rapid urbanization and income growth have led to an increase in demand for livestock products. China, being the world's largest consumer of pork, has seen a significant rise in pork consumption over the years, driven by urbanization and changing dietary habits (FAO, 2020). In India, the dairy sector is a significant contributor to the agricultural economy, providing livelihoods to millions of small-scale farmers and ensuring a steady supply of milk and dairy products to meet the growing demand of the population (Thornton, 2018). These examples highlight the importance of livestock markets in addressing food security challenges and sustaining economic growth in developing economies.

In developing economies, the dynamics of livestock markets are shaped by factors such as population growth, urbanization, and income levels. For example, in China, rapid urbanization and income growth have led to a shift in dietary patterns towards increased consumption of livestock products such as meat and dairy. This shift has driven significant changes in the livestock sector, with increased demand for livestock products necessitating improvements in production systems and supply chains (FAO, 2019). Additionally, in countries like Brazil, the livestock sector plays a crucial role in the economy, contributing significantly to agricultural GDP and providing employment opportunities for millions of people (FAO, 2020). Brazil is one of the world's largest exporters of beef and poultry, with the livestock sector playing a central role in driving economic growth and development.

Moreover, in Southeast Asian countries like Vietnam and Indonesia, the livestock sector is a vital source of income and nutrition for millions of small-scale farmers and rural households. In Vietnam, for instance, the livestock sector contributes substantially to agricultural GDP and provides livelihoods for a significant portion of the population (FAO, 2019). However, challenges such as disease outbreaks, environmental degradation, and limited access to markets pose significant constraints to the sustainable development of the livestock sector in these countries. Addressing these challenges requires concerted efforts from governments, international organizations, and other stakeholders to promote sustainable intensification, improve access to markets, and strengthen resilience in the face of climate change and other external shocks.

In developing economies, the livestock sector often serves as a crucial lifeline for food security, poverty alleviation, and rural development. For instance, in Sub-Saharan Africa, where a large portion of the population relies on agriculture for their livelihoods, livestock play a central role in ensuring household food security and income generation. Countries like Kenya and Uganda

have vibrant livestock sectors, with millions of smallholder farmers relying on livestock for their sustenance and livelihoods (FAO, 2020). In these economies, livestock contribute not only to food production but also to social and cultural dimensions, serving as a source of prestige and social capital within communities.

However, despite its importance, the livestock sector in many developing economies faces numerous challenges, including limited access to veterinary services, poor infrastructure, and inadequate market access. For example, in countries like Ethiopia and Bangladesh, livestock production is often characterized by low productivity levels and high vulnerability to climate change and disease outbreaks (Thornton, 2018). Moreover, the informal nature of many livestock markets in developing economies can exacerbate issues related to food safety and quality, posing risks to both human health and market access. Addressing these challenges requires comprehensive policy interventions that prioritize investments in veterinary services, infrastructure development, and market access, while also promoting sustainable livestock production practices and strengthening resilience to climate change and other external shocks.

The livestock sector plays a multifaceted role in supporting livelihoods, food security, and economic development. Countries across the region, such as Nigeria, Ethiopia, and Kenya, have large and diverse livestock populations that contribute significantly to agricultural GDP and provide livelihoods for millions of people, particularly in rural areas (FAO, 2019). Livestock production in these economies encompasses a wide range of activities, including traditional pastoralism, mixed crop-livestock farming, and intensive commercial production systems. Additionally, livestock serve as a critical source of protein, micronutrients, and income for many households, particularly in areas where alternative sources of livelihoods are limited.

In Sub-Saharan African economies, livestock markets play a crucial role in ensuring food security and livelihoods for millions of people. Countries like Ethiopia and Nigeria have large livestock populations, which serve as a vital source of income and nutrition for rural communities. In Ethiopia, livestock contributes to about 40% of agricultural GDP and supports the livelihoods of over 60% of the rural population (FAO, 2019). Similarly, in Nigeria, the livestock sector plays a significant role in the economy, providing employment opportunities and contributing to household food security (FAO, 2020). However, challenges such as disease outbreaks, inadequate infrastructure, and limited access to markets hinder the full potential of the livestock sector in Sub-Saharan Africa, emphasizing the need for targeted interventions to enhance productivity and resilience in these economies.

However, despite its importance, the livestock sector in Sub-Saharan Africa faces numerous challenges that hinder its full potential. One of the key challenges is the prevalence of diseases such as foot-and-mouth disease, African swine fever, and Rift Valley fever, which pose significant risks to animal health and productivity (FAO, 2020). Moreover, inadequate access to veterinary services, poor infrastructure, and limited market access further exacerbate these challenges, constraining the growth and development of the livestock sector. Addressing these challenges requires holistic approaches that encompass investments in veterinary infrastructure, capacity building, disease surveillance, and market development. Furthermore, promoting sustainable livestock production practices, such as improved breeds, feed management, and grazing management, is crucial for enhancing productivity, resilience, and environmental sustainability in Sub-Saharan African economies.

Trade policies and regulations have profound effects on global livestock markets and food security. Firstly, protectionist trade policies, such as tariffs and quotas, can restrict the flow of

livestock products across borders, leading to reduced market access and increased prices for consumers. For instance, a study by Anderson and Martin (2017) highlights how trade barriers in the form of tariffs on agricultural products can hinder the ability of developing countries to access international markets, thereby limiting their potential for economic growth and food security. Conversely, liberalized trade policies can stimulate trade flows, promoting efficiency gains and market integration, which can enhance food security by providing consumers with a wider variety of affordable livestock products.

Secondly, sanitary and phytosanitary (SPS) regulations play a critical role in ensuring food safety and animal health in global livestock trade. While SPS measures are essential for protecting human and animal health, they can also act as non-tariff barriers to trade if not implemented transparently or harmonized with international standards. For instance, stringent SPS requirements imposed by importing countries can pose challenges for livestock exporters in meeting compliance standards, thereby limiting market access and affecting food security (WTO, 2020). However, effective implementation of SPS regulations can also enhance consumer confidence in livestock products, facilitating market access and promoting sustainable growth in global livestock markets.

Statement of the Problem

The effects of trade policies and regulations on global livestock markets and food security remain a topic of critical concern in contemporary international trade discourse. While trade liberalization has the potential to enhance efficiency and foster market integration, the impact of trade policies and regulations on the livestock sector and food security is multifaceted and complex. Recent studies have highlighted the importance of understanding how trade policies, including tariffs, quotas, and sanitary and phytosanitary (SPS) measures, influence the dynamics of global livestock markets and the ability of countries to ensure food security for their populations (FAO, 2020). Moreover, the COVID-19 pandemic has underscored the vulnerability of global food supply chains to disruptions caused by trade restrictions and regulatory measures, further emphasizing the need for comprehensive research on the effects of trade policies and regulations on livestock markets and food security (Headey & Fan, 2020).

Theoretical Review

New Trade Theory

Developed by Paul Krugman, the New Trade Theory posits that economies of scale, product differentiation, and imperfect competition play crucial roles in determining patterns of trade. In the context of global livestock markets and food security, this theory highlights the significance of economies of scale in livestock production and the role of product differentiation in international trade. Trade policies and regulations that affect economies of scale, such as tariffs, quotas, and sanitary standards, can influence the competitiveness of livestock producers and the structure of global markets, ultimately impacting food security (Krugman, 2012).

Institutional Theory

Originating from scholars such as Douglass North, Institutional Theory emphasizes the role of institutions and regulatory frameworks in shaping economic behavior and outcomes. In the context of trade policies and regulations on global livestock markets and food security, this theory underscores the importance of institutions in enforcing trade agreements, implementing regulatory standards, and resolving disputes. Effective institutions and regulatory frameworks can promote transparency, reduce uncertainty, and facilitate trade, thereby enhancing food

security by ensuring the safety and quality of livestock products in international markets (North, 1991).

Empirical Review

McCorriston (2018) analyzed the effects of trade liberalization policies, including tariff reductions and market access improvements, on the U.S. beef industry. The study utilizes a combination of quantitative analysis and econometric modeling to assess the impact of trade policy changes on beef exports, domestic production, and prices. The findings indicate that trade liberalization has led to increased exports of U.S. beef, expansion of the domestic beef industry, and moderation of beef prices for consumers. The study suggests that policymakers continue to pursue trade liberalization measures to enhance the competitiveness of the U.S. beef industry and ensure stable access to international markets.

Carbone (2017) investigated the influence of sanitary and phytosanitary (SPS) regulations on poultry trade within the European Union (EU). The study employs a gravity model framework to analyze bilateral trade flows of poultry products among EU member states and assess the impact of SPS regulations on trade. The findings suggest that stringent SPS regulations tend to reduce poultry trade volumes between EU countries, particularly for products subject to strict health and safety standards. The study recommends harmonizing SPS regulations across EU member states to facilitate intra-regional poultry trade and improve food security.

Jaleta (2016) examined the relationship between trade policy interventions, such as tariffs and subsidies, and the performance of the livestock sector in developing countries. The study employed a panel data analysis to investigate the effects of trade policy variables on livestock production, trade, and market dynamics across a sample of developing countries. The findings indicated that trade protection measures, such as tariffs on imported livestock products, can distort domestic markets, reduce efficiency, and hinder the development of the livestock sector in developing countries. The study suggested that policymakers in developing countries should consider liberalizing trade policies to foster competitiveness, improve market access, and enhance food security.

Bouamra-Mechemache (2017) investigated the potential effects of trade agreements, such as the Trans-Pacific Partnership (TPP), on dairy markets and food security in member countries. The study employed a computable general equilibrium (CGE) model to simulate the economic impacts of tariff reductions and market access provisions on dairy production, trade, and welfare. The findings suggest that the TPP agreement would lead to increased dairy trade among member countries, with mixed effects on domestic dairy producers and consumers depending on their relative competitiveness and market access. The study highlights the importance of comprehensive policy measures, including targeted support for vulnerable dairy farmers, to mitigate potential adverse effects of trade agreements on food security.

Groom (2020) examined the impact of trade policy uncertainty, particularly surrounding the Brexit referendum, on livestock markets and food security in the United Kingdom (UK). The study employs event study analysis to assess the effects of Brexit-related announcements and events on livestock prices, trade volumes, and investment decisions. The findings suggest that trade policy uncertainty induced by the Brexit referendum has led to increased volatility in UK livestock markets, reduced investment in the sector, and heightened concerns about future market access and regulatory alignment. The study underscores the importance of clarifying trade policy frameworks and providing support measures for livestock producers to mitigate the negative effects of uncertainty on food security.

Cuong (2019) evaluated the effects of trade policies, including tariffs and trade agreements, on livestock production systems and food security in Vietnam. The study combines qualitative interviews with key stakeholders and quantitative analysis of trade data to assess the impacts of trade policy interventions on livestock producers, consumers, and markets. The findings indicated that trade liberalization measures have led to increased imports of livestock products, affecting domestic producers' competitiveness and market access, while also providing consumers with greater variety and affordability of livestock products. The study recommends targeted support for small-scale livestock producers to enhance their competitiveness and resilience in the face of increased market competition resulting from trade liberalization.

Kumar (2018) compared the effects of trade policies, including tariffs, subsidies, and trade agreements, on food security outcomes in India and China, two major developing countries with significant livestock sectors. The study employs a comparative analysis framework, combining qualitative and quantitative methods to examine the impacts of trade policy interventions on food availability, accessibility, and utilization in India and China. The findings reveal divergent effects of trade policies on food security outcomes in India and China, influenced by factors such as domestic agricultural policies, market structures, and institutional frameworks. The study emphasizes the importance of context-specific policy interventions tailored to the unique challenges and opportunities faced by each country to enhance food security and promote sustainable livestock production.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries

RESULTS

Conceptual Gaps

While the studies focus on trade policy interventions and their impacts on livestock markets and food security, there's a gap in exploring the broader socio-economic implications. For instance, McCorriston (2018) and Jaleta (2016) primarily analyze the effects of trade liberalization policies on specific sectors (beef and poultry, respectively), but they do not delve deeply into the broader implications for employment, income distribution, or rural development. Exploring these broader impacts would provide a more comprehensive understanding of the consequences of trade policies on food security.

Contextual Gaps

The studies predominantly focus on developed economies (e.g., the U.S., EU, UK) and some major developing countries (e.g., Vietnam, India, China), with limited representation from other regions. For instance, there's a lack of analysis on the impacts of trade policies on livestock markets and food security in regions such as Latin America, Africa, or the Middle East. Understanding how trade policies affect livestock production and food security in diverse contexts would provide valuable insights for policymakers globally.

Geographical Gaps

The studies primarily focus on specific regions or countries, neglecting the interconnectedness of global livestock markets and food security. For instance, while Bouamra-Mechemache

(2017) examines the potential effects of the Trans-Pacific Partnership (TPP) on dairy markets in member countries, there's limited consideration of how these effects may spill over to non-member countries or impact global food security dynamics. Exploring the spillover effects and interdependencies among different regions would provide a more holistic understanding of the global implications of trade policies on food security.

CONCLUSION AND RECOMMENDATIONS

Conclusion

In conclusion, the effects of trade policies and regulations on global livestock markets and food security in Kenya underscore the intricate interplay between local agricultural systems and international trade dynamics. Trade policies, including tariffs, quotas, and sanitary and phytosanitary (SPS) measures, significantly influence Kenya's livestock sector by shaping market access, competitiveness, and domestic production levels. While trade liberalization measures may enhance market opportunities and foster economic growth, they also pose challenges to local farmers and food security by exposing them to international competition and market fluctuations.

Moreover, regulatory frameworks play a crucial role in ensuring food safety, animal health, and environmental sustainability in livestock production and trade. Compliance with international standards and regulations is essential for accessing global markets and safeguarding public health. However, stringent regulatory requirements may pose compliance challenges for small-scale producers and limit their participation in international trade, exacerbating inequalities and food insecurity.

Moving forward, policymakers need to consider the broader socio-economic implications of trade policies on employment, income distribution, and rural development while addressing conceptual, contextual, and geographical gaps in existing research. By adopting a holistic approach to trade policy formulation and implementation, informed by evidence-based analysis and stakeholder engagement, policymakers can better balance the objectives of promoting trade, supporting domestic producers, and ensuring food security for all. Moreover, international cooperation and coordination are essential to address global challenges such as climate change and pandemics, which have significant implications for livestock markets and food security on a global scale.

Recommendations

Theory

Further research should focus on developing theoretical frameworks that capture the complex interactions between trade policies, livestock markets, and food security. This could involve integrating insights from diverse disciplines such as economics, agricultural science, and political science to provide a more comprehensive understanding of the mechanisms through which trade policies influence food security outcomes. Additionally, theoretical models should account for the heterogeneous impacts of trade policies across different regions, sectors, and stakeholders, taking into consideration contextual factors such as market structures and institutional frameworks.

Practice

In practice, efforts should be made to enhance the transparency, coherence, and consistency of trade policies and regulations related to livestock markets. This could involve promoting greater stakeholder engagement in the policy-making process, including representatives from

the livestock industry, consumer groups, and civil society organizations. Moreover, policymakers should prioritize capacity-building initiatives to strengthen the regulatory frameworks governing food safety, animal health, and environmental sustainability in the context of international trade. By fostering a more inclusive and participatory approach to trade policy formulation and implementation, practitioners can ensure that trade policies contribute to both economic growth and food security objectives.

Policy

From a policy perspective, there is a need to adopt a balanced approach that promotes trade while safeguarding food security and sustainable development goals. Policymakers should prioritize measures that enhance the resilience and competitiveness of domestic livestock producers, particularly small-scale farmers and vulnerable communities. This could involve targeted support programs such as access to credit, technical assistance, and market information, aimed at improving productivity, market access, and income generation. Furthermore, trade agreements should incorporate provisions that safeguard food security objectives, such as special safeguard mechanisms and exemptions for sensitive agricultural products, to prevent market distortions and ensure equitable access to food for all.

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