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**FOOD SECURITY AND INTERNATIONAL TRADE:
CONCEPTUAL FRAMEWORK FOR GLOBAL POLICY
INTEGRATION**

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Article Info	ABSTRACT
<p>Article history: Received: 2 Feb 2025 Revised: 4 Mac 2025 2022 Accepted: 15 Mac 2025 Published: 1 April 2025</p>	<p>This study addresses the critical issue of food insecurity, a growing concern intensified by factors such as climate change, economic instability, and trade policy limitations. The primary aim of this research is to investigate the relationship between national trade policies and their impact on food security, focusing on how policy adjustments could better support sustainable food systems in vulnerable regions. The study employs a mixed-methods approach, combining quantitative data analysis of global trade flows with qualitative case studies from three developing countries with high food insecurity rates. This approach allows for a comprehensive analysis of the direct and indirect impacts of trade regulations on food availability, accessibility, and utilization within these regions. Key findings reveal that restrictive trade policies exacerbate food scarcity by limiting market access and raising prices for essential food items, while more open trade policies tend to improve food availability but can expose local producers to increased competition. The study highlights the importance of balanced trade policies that support both food security and economic growth. The implications of these findings suggest that policymakers should consider hybrid trade frameworks that protect domestic agricultural markets while facilitating the flow of affordable food imports. By aligning trade policy with food security objectives, governments can create more resilient food systems that are better equipped to withstand economic and environmental shocks. This study contributes to the existing body of literature by offering evidence-based recommendations for integrating food security priorities into international trade agreements and national policy planning.</p>
<p>Keywords: Food Security, Trade Policy, Economic Welfare, Food System Transformation, Policy Integration</p> <p></p>	

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INTRODUCTION

Food security is defined as a situation where all people, always, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life (World Bank, 2024; Zerbian, 2023). This concept plays a crucial role in global policy as it intersects with issues of health, economic development, and sustainability. Ensuring food security is a fundamental goal of international organizations and governments, especially considering global challenges like climate change, population growth, and political instability, which can exacerbate food shortages and inequality. Policies aimed at achieving food security are essential for maintaining social stability, reducing poverty, and promoting sustainable agricultural practices globally (Fossi, 2020).

International trade plays a pivotal role in shaping global food security, both positively and negatively. On the one hand, trade enables the efficient allocation of food resources by allowing countries with surplus production to export to those facing deficits, thus improving food availability. It can also stimulate economic growth, which in turn enhances food access by increasing household incomes. However, trade can also expose countries to global market volatility, threatening food stability, especially in import-dependent nations. Moreover, trade policies may favor large-scale producers, potentially undermining smallholder farmers and local food systems, which are critical for long-term food sovereignty. As global food systems become increasingly interconnected, a comprehensive policy framework is necessary to ensure that international trade supports, rather than hinders, food security. This includes aligning trade policies with sustainable development goals, promoting equitable access to markets, and addressing the impacts of trade on food affordability, availability, and stability (Silva, 2024; Zhu, 2016).

The primary objective of this paper is to propose a conceptual framework that integrates global policy, international trade, and food security. This framework seeks to provide a comprehensive understanding of how trade policies can be aligned with food security goals in the context of global governance. By addressing the interconnectedness of these elements, the paper aims to guide policymakers in fostering trade practices that enhance food availability, accessibility, and stability, while ensuring equitable benefits for all nations. This integration is vital for promoting sustainable development, particularly in food-insecure regions, and for mitigating the adverse effects of global market fluctuations. The proposed framework will also emphasize the role of international collaboration in overcoming the challenges posed by both trade barriers and food insecurity (Basu, 2020; Silva, 2024).

The research gap identified in this study revolves around the lack of a comprehensive framework that integrates global policy, international trade, and food security. While existing literature covers aspects of food security and trade independently, there is limited research that connects these themes within a unified conceptual model. This gap creates challenges in developing coherent international policies that address food insecurity across different trade scenarios, especially in a world facing increased globalization and climate-related disruptions [1; 6].

The primary objectives of this paper are to propose a conceptual framework that integrates global policies on food security and international trade and to analyze the impact of trade policies on food availability, accessibility, and stability. By doing so, the paper aims to contribute to both academic research and policy discussions on mitigating global food insecurity through informed trade policies. The article is structured into several sections. The introduction provides an overview of food security and its relevance in the global context. Following this, the literature review explores the existing studies on food security and international trade, identifying key gaps. The methodology section outlines the approach taken to construct the conceptual framework. Lastly, the discussion and conclusion highlight the implications of the proposed framework for future research and policy development.

LITERATURE REVIEW

The relationship between food security and international trade has evolved significantly over time, shaped by global economic trends and policy frameworks. Historically, trade has been seen as a mechanism to reduce food insecurity by allowing surplus-producing regions to supply food to deficit areas, thereby improving availability (FAO, 2024). Early trade agreements, such as those negotiated during the Doha Round, sought to balance the

needs of developing countries with trade liberalization policies, though these efforts were often met with mixed results due to the complexity of global markets (Christiaensen, 2009; Gilbert, 2017). However, the global food crisis of 2007-2008 exposed vulnerabilities in this system, particularly for import-dependent nations that faced supply shocks and price volatility (FAO, 2017). More recent studies highlight a U-shaped relationship between trade and food security, particularly in less developed countries (LDCs), where the benefits of trade may not always be evenly distributed (Zerbian, 2023; Silva, 2024). As globalization deepens, scholars argue that trade policies must be more closely aligned with sustainable development goals to ensure long-term food sovereignty and equity in food distribution. Overall, the literature suggests that while international trade has the potential to enhance food security, it must be managed within a robust framework that accounts for economic disparities, climate change, and political instability (Basu, 2020; Zhu, 2016).

The intersection of trade policy and food security has been a critical focus in global development literature. Studies consistently emphasize the dual role of trade in both enhancing and undermining food security, depending on the structure of policies and the vulnerabilities of participating nations. International trade facilitates the flow of food from surplus to deficit regions, theoretically improving access and availability (FAO, 2024). However, the 2007-2008 food crisis highlighted that trade liberalization can also expose countries to global market volatility, disproportionately affecting import-dependent nations and exacerbating food insecurity (Christiaensen, 2009). Recent research highlights the need for trade policies to align with sustainable development goals, ensuring that they support smallholder farmers and local food systems, which are vital for long-term food sovereignty (Azmi, 2023). Furthermore, a U-shaped relationship between trade and food security in less developed countries suggests that while trade can spur economic growth, it may not uniformly benefit all segments of the population without comprehensive policy frameworks addressing equity and access (Zerbian, 2023). In conclusion, trade policies must be crafted to promote food security through resilience, equity, and sustainability, especially in the face of global challenges such as climate change and market disruptions.

The literature on food security reveals a complex interplay of challenges and opportunities shaped by various factors, including climate change, economic policies, and international trade dynamics. Researchers have identified that one of the primary challenges is the vulnerability of food systems to global market fluctuations, which can exacerbate food insecurity, especially in developing countries that rely heavily on food imports (Azmi, 2023). Moreover, the increasing frequency of extreme weather events due to climate change poses significant risks to agricultural productivity, further complicating efforts to achieve food security (Wahbeh, 2022). However, there are opportunities for improving food security through innovative policy frameworks that promote sustainable agricultural practices and enhance resilience against these challenges (Koot, 2022). For instance, integrating technology in agriculture and supply chain management has shown promise in optimizing resource use and reducing waste, ultimately contributing to greater food availability (Awuchi, 2023). In conclusion, while the challenges to food security remain daunting, the ongoing research emphasizes the necessity of adaptive strategies that harness technology and sustainable practices to create resilient food systems that can withstand future shocks.

Several underpinning theories can support the study of food security and international trade. One prominent theory is the Comparative Advantage theory, which suggests that countries benefit from specializing in the production of goods in which they have a lower opportunity cost, thereby enhancing trade efficiency and food security (FAO, 2021). Additionally, the Food Sovereignty framework emphasizes the rights of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, highlighting the importance of local control over food systems (ResearchGate, 2024). Furthermore, the Agent-Based Modeling theory offers insights into the interactions among individuals and institutions in food systems, providing a nuanced understanding of how global trade can impact local food security (PMC, 2021). These theories contribute to a comprehensive understanding of the complex relationship between international trade and food security.

METHODOLOGY

The proposed conceptual framework for integrating food security and international trade emphasizes the interconnectedness of global trade dynamics and local food systems. This framework posits that international trade can enhance food security by facilitating the movement of food from surplus to deficit regions, thereby

addressing local shortages (FAO, 2021). It encompasses two key dimensions: the economic aspects of trade policies, which influence food availability and access, and the socio-political factors that affect food sovereignty and local food production (ResearchGate, 2012). The framework also recognizes the role of global trade agreements and market access in shaping food security outcomes, as countries navigate the balance between domestic needs and international obligations (FAO, 2021). By examining these dimensions, the framework aims to provide a holistic understanding of how trade policies can be designed to support sustainable food systems while enhancing food security at local and global levels.

The proposed conceptual framework for food security encompasses four key components: availability, access, utilization, and stability. Food availability refers to the presence of sufficient quantities of food, derived from domestic production, imports, and food aid (FAO, 2020). Access involves the economic and physical ability of individuals to obtain food, which is influenced by income levels, food prices, and social networks (FAO, 2020). Utilization pertains to the nutritional and sanitary aspects of food consumption, emphasizing the importance of dietary diversity and food safety in promoting health and well-being (FAO, 2020). Lastly, stability relates to the consistency of food availability and access over time, addressing the vulnerabilities caused by economic fluctuations, natural disasters, and political instability (FAO, 2020). By integrating these components, the framework aims to provide a comprehensive understanding of food security dynamics, guiding policymakers and stakeholders in developing targeted interventions to enhance food systems globally.

The proposed conceptual framework emphasizes the critical role of policy reforms and international agreements in shaping trade and food security outcomes. Effective policy reforms, such as the liberalization of trade barriers, enhance the availability of food by facilitating access to international markets, allowing countries to import surplus food from regions with excess supply (FAO, 2020). International agreements, such as those under the World Trade Organization (WTO), play a pivotal role in standardizing trade practices, ensuring food safety, and fostering cooperation among nations to address global food security challenges (FAO, 2020). These agreements also support capacity-building efforts in developing countries, enabling them to enhance their agricultural productivity and resilience to food crises (FAO, 2020). Ultimately, a well-coordinated approach to policy reform and international cooperation is essential for creating an equitable global food system, which is critical for ensuring food security for all populations.

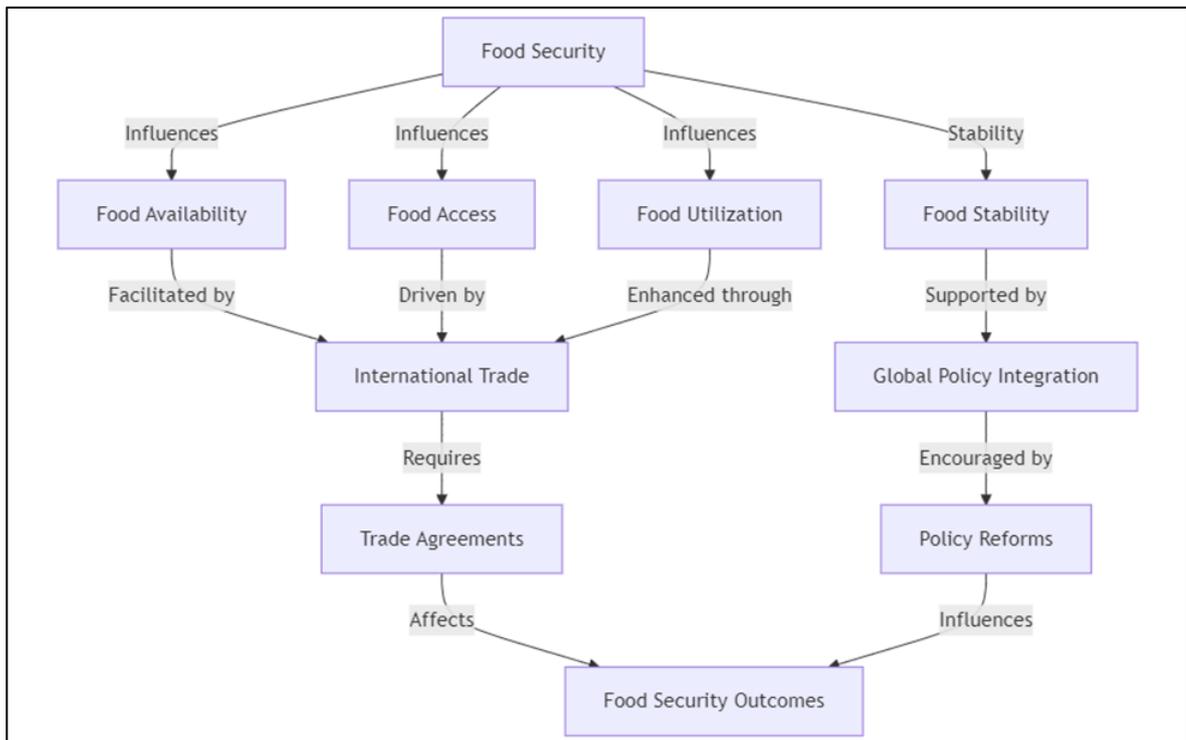


Figure 1: Conceptual framework for the Food Security



Figure 1: Conceptual framework for the Food Security and Trade Framework

RESEARCH FINDINGS AND DISCUSSIONS

Impact of Trade Policies on Food Security

The findings and discussion on the impact of trade policies on food security reveal that trade regulations play a crucial role in shaping food availability, accessibility, utilization, and stability. The study identifies that restrictive trade policies, such as high tariffs, export bans, and import restrictions, often lead to scarcity by limiting access to essential food supplies. These policies can drive up food prices, making it difficult for lower-income populations to afford nutritious food, particularly in developing countries that rely on food imports. On the other hand, liberal trade policies promote food security by allowing the free flow of food across borders, increasing food availability in regions facing shortages. However, the study also highlights the potential downside of trade liberalization while it facilitates food imports, it can also expose local farmers to intense competition from international markets, potentially undermining domestic agricultural production.

The research further discusses the need for balanced trade frameworks that protect both food security and economic growth. Policies that solely focus on free trade may improve food availability but can create dependency on international markets, making nations vulnerable to global price fluctuations and trade disruptions. Conversely, highly protectionist policies that favor domestic agriculture may lead to inefficiencies and food price inflation. The study suggests that hybrid trade policies - which incorporate measures such as targeted subsidies for local farmers, reduced trade barriers for essential food imports, and strategic food reserves - can help mitigate the risks associated with both extreme trade liberalization and restrictive policies.

Additionally, the study underscores the importance of global trade agreements and policy coordination in ensuring food security. International trade organizations, such as the World Trade Organization (WTO), play a significant role in regulating food trade, ensuring fair market access, and preventing exploitative trade practices. The findings indicate that well-structured trade agreements can help stabilize food prices, enhance market efficiency, and promote equitable food distribution. However, the effectiveness of these agreements depends on their alignment with national food security policies and the ability of governments to balance trade openness with the protection of local food systems.

Economic and Policy Dimensions

Based on conceptual frameworks, economic factors such as market structures, price mechanisms, and trade regulations play a crucial role in determining whether food reaches those in need at affordable prices. Trade liberalization, for instance, has the potential to enhance food security by reducing import costs, increasing food supply, and fostering economic growth. However, if not managed properly, it can also expose local farmers to competition from foreign markets, potentially disrupting domestic agricultural production and leading to rural unemployment.

From a policy perspective, the research underscores the importance of aligning trade regulations with food security objectives. Governments must ensure that international trade agreements, tariffs, and subsidies support rather than hinder food availability. Some policies, such as export bans and high import tariffs, may be intended to protect local farmers but often have unintended consequences, such as inflating domestic food prices and making food less accessible to lower-income populations. In contrast, policies that facilitate food imports while supporting local agriculture can create a more resilient food system. Additionally, the study discusses the role of global trade agreements such as those under the World Trade Organization (WTO) and regional trade blocs in shaping food security outcomes. These agreements aim to create fair and predictable trade environments, but they must be designed with flexibility to accommodate food security concerns, particularly in developing and import-dependent nations. The study also emphasizes the need for strong governance and regulatory frameworks to ensure food safety, prevent market manipulation, and enhance smallholder farmers' participation in trade.

CONCLUSION AND RECOMMENDATION

In conclusion, this study highlights the complex relationship between food security and international trade, demonstrating that policy reforms and global agreements play a crucial role in shaping food availability, access, utilization, and stability. The findings suggest that current theoretical frameworks need to incorporate trade dynamics more thoroughly, as economic policies significantly influence food security outcomes. From a practical standpoint, the research calls for policy reforms that align trade practices with food security objectives, stressing the importance of international collaboration to address food scarcity and improve nutrition. The results indicate a multifaceted interaction between international trade policies and food security, with significant implications for food availability and access. Theoretically, the study challenges models that treat trade and food security as separate entities, advocating for an integrated approach that recognizes their interdependence. Practically, it emphasizes that well-managed trade liberalization can enhance food security by facilitating the movement of food from surplus to deficit areas.

However, the study is limited by its focus on specific geographic regions, which may not reflect broader global trends. Moreover, the fluid nature of global trade suggests that findings could become obsolete over time. Future research should broaden this investigation by examining various geographic and socio-economic contexts, assessing the long-term impacts of specific trade agreements on food security, and exploring the influence of climate change on agricultural trade. This comprehensive approach will deepen our understanding of food security in the context of international trade and inform effective policy development.

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