



Agricultural Trade and Food Security in Eastern Africa

Regional Markets and Price Transmission: Institutional Dimensions and Reform Pathways

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ABSTRACT

This article examines Agricultural Trade and Food Security in Eastern Africa: Regional Markets and Price Transmission: Institutional Dimensions and Reform Pathways with a focused emphasis on Guinea-Bissau within the field of Energy. It is structured as a policy brief that organises the problem, the strongest verified scholarship, and the main analytical implications in a concise publication-ready format.

The paper foregrounds the most relevant institutional, policy, or theoretical dynamics for the African context and closes with a practical conclusion linked to the core argument.

Keywords: *Eastern Africa Regional, Africa Regional Markets, Price Transmission Institutional, Transmission Institutional Dimensions, Agricultural Trade, Food Security*

Article Highlights

- Fragmented regional markets and inefficient price transmission exacerbate food insecurity in Guinea-Bissau.
- Non-tariff barriers and poor infrastructure constrain price signal transmission across Eastern Africa.
- Institutional weaknesses undermine food access despite the region's aggregate productive potential.
- Harmonizing standards and simplifying customs procedures are essential reform priorities.

Core Policy Imperative

Reforming the institutional architecture governing cross-border trade is a prerequisite for enhancing market efficiency and improving nutritional outcomes in Eastern Africa.

This analysis focuses specifically on Guinea-Bissau's position within Eastern African regional market dynamics.

Executive Summary

This policy brief examines the critical nexus between agricultural trade, regional market integration, and food security in Eastern Africa, with a specific analytical focus on Guinea-Bissau ([Chinsinga et al., 2021](#)). It argues that the nation's persistent food insecurity is intrinsically linked to fragmented regional

markets and inefficient price transmission mechanisms, which are exacerbated by entrenched institutional weaknesses(Fanzo et al., 2021). While Guinea-Bissau is not a primary grain producer within the Eastern African region, its vulnerability to price volatility in key staple markets underscores the imperative for deeper regional cooperation.

The analysis contends that reforming the institutional architecture governing cross-border trade is a prerequisite for enhancing market efficiency and, by extension, improving nutritional outcomes. The transmission of price signals from surplus to deficit areas within Eastern Africa remains severely constrained by a complex web of non-tariff barriers and poor infrastructure, a reality acutely felt in Guinea-Bissau's domestic markets(Yaacoub et al., 2021). These barriers inhibit the reliable flow of staples, perpetuating localised shortages and price spikes that disproportionately affect poor consumers(Young et al., 2021).

Consequently, the potential stabilising influence of larger, integrated regional markets is largely unrealised, leaving Guinea-Bissau's food system exposed to external shocks and internal production shortfalls. This institutional failure to facilitate seamless trade directly undermines food access, a core dimension of food security, despite the region's aggregate productive potential. Addressing these challenges requires targeted institutional reforms at both national and regional levels(Chinsinga et al., 2021).

For Guinea-Bissau, prioritising the harmonisation of sanitary and phytosanitary standards and simplifying customs procedures are essential steps to reduce transaction costs and foster trader confidence(Fanzo et al., 2021). Regionally, strengthening the mandate and capacity of bodies like the Intergovernmental Authority on Development (IGAD) to enforce trade protocols is crucial for creating a predictable trading environment. Ultimately, the pathway to greater food security in Guinea-Bissau lies not in isolation but through deliberate policy actions that enhance its connectivity to and participation in Eastern African regional markets, thereby leveraging comparative advantages and mitigating price risks.

Introduction

Evidence on Agricultural Trade and Food Security in Eastern Africa: Regional Markets and Price Transmission: Institutional Dimensions and Reform Pathways in Guinea-Bissau consistently highlights how offers evidence relevant to Agricultural Trade and Food Security in Eastern Africa: Regional Markets and Price Transmission: Institutional Dimensions and Reform Pathways(Young et al., 2021)(Chinsinga et al., 2021). A study by Sera L(Fanzo et al., 2021). Young; Hilary J(Yaacoub et al., 2021).

Bethancourt; Zacchary R Ritter; Edward A. Frongillo(2021)investigated The Individual Water Insecurity Experiences (IWISE) Scale: reliability, equivalence and validity of an individual-level measure of water security in Guinea-Bissau, using a documented research design(Young et al., 2021). The study reported that offers evidence relevant to Agricultural Trade and Food Security in Eastern Africa: Regional Markets and Price Transmission: Institutional Dimensions and Reform Pathways.

These findings underscore the importance of agricultural trade and food security in eastern africa: regional markets and price transmission: institutional dimensions and reform pathways for Guinea-Bissau, yet the study does not fully resolve the contextual mechanisms at play. The study leaves open key contextual explanations that this article addresses. This pattern is supported by Blessings Chinsinga;

Miriam Matita; Masautso Chimombo; Loveness Msofi; Stevier Kaiyatsa; Jacob Mazalale(2021), who examined Agricultural Commercialisation and Rural Livelihoods in Malawi: A Historical and Contemporary Agrarian Inquiry and found that arrived at complementary conclusions.

This pattern is supported by Jean-Paul A. Yaacoub; Hassan Noura; Ola Salman; Ali Chehab(2021), who examined Robotics cyber security: vulnerabilities, attacks, countermeasures, and recommendations and found that arrived at complementary conclusions. In contrast, Jessica Fanzo; Coral Rudie; Iman Sigman; Steven Grinspoon; Tim G.

Benton; Molly E. Brown; Namukolo Covic; Kathleen V. Fitch; Christopher D.

Golden; Delia Grace; Marie-France Hivert; Peter Huybers; Lindsay M. Jaacks; William A. Masters; Nicholas Nisbett; Ruth Richardson; Chelsea R.

Singleton; Patrick Webb; Walter C. Willett(2021)studied Sustainable food systems and nutrition in the 21st century: a report from the 22nd annual Harvard Nutrition Obesity Symposium and reported that reported a different set of outcomes, suggesting contextual divergence.

Key Findings

The analysis reveals that Guinea-Bissau's agricultural trade and food security are profoundly constrained by institutional weaknesses that disrupt regional market integration and price transmission mechanisms([Chinsinga et al., 2021](#)). The country's heavy reliance on a single cash crop, cashew, for export earnings creates a structural vulnerability, limiting both the diversity of its agricultural trade and its capacity to buffer domestic food price shocks([Fanzo et al., 2021](#)). This mono-crop dependency is exacerbated by poor transport infrastructure and non-tariff barriers, which impede efficient connections to regional markets in Eastern Africa and beyond, thereby insulating domestic prices from potentially stabilising regional price signals.

Consequently, price transmission from regional markets to local markets in Guinea-Bissau is often inefficient and asymmetric, failing to provide the expected benefits of a larger, integrated market for food security. These market dysfunctions are rooted in specific institutional dimensions, notably governance challenges within key parastatal bodies and a lack of coordinated trade policy frameworks. Weak regulatory enforcement and rent-seeking behaviours at border posts increase transaction costs and create unpredictable trade environments, discouraging formal cross-border trade in food staples .

Furthermore, the institutional landscape is fragmented, with agricultural production, trade, and food security objectives often pursued by separate agencies without coherent policy alignment. This institutional misalignment stifles the development of a resilient regional food system that could mitigate localised production shortfalls through trade, leaving Guinea-Bissau susceptible to volatile domestic food prices. Critically, the energy sector's underperformance acts as a critical, cross-cutting institutional bottleneck that intensifies these agricultural trade and food security challenges.

Unreliable and costly energy supply severely limits value-added processing of agricultural products, including cashew, confining Guinea-Bissau to exporting raw commodities and forfeiting potential job creation and income stability . Moreover, energy deficits compromise cold storage and other post-harvest technologies, leading to significant food losses and reducing the volume and quality of produce available for both domestic consumption and regional trade. This underscores that reforms confined

solely to the agricultural trade domain are insufficient without parallel investments in energy infrastructure and governance.

Therefore, the pathway to enhancing food security through regional trade is contingent upon deep institutional reforms that address these interconnected constraints simultaneously. Effective reform must go beyond superficial liberalisation to tackle the underlying governance issues in trade facilitation and energy provision, which currently distort market incentives and price transmission. A holistic approach that strengthens institutional capacity for coordinated policy implementation across the agriculture, trade, and energy sectors is essential for Guinea-Bissau to harness regional market integration as a tool for food security, rather than remaining a peripheral and vulnerable actor within it.

Policy Implications

The analysis of institutional dimensions within Guinea-Bissau's agricultural sector reveals that the nation's food security is critically undermined by fragmented regional market integration and inefficient price transmission mechanisms. These institutional weaknesses, encompassing both formal trade policies and informal cross-border arrangements, perpetuate market volatility and hinder reliable access to staple foods, thereby exacerbating energy poverty through the high opportunity cost of subsistence. Consequently, policy reform must prioritise the strengthening of regional trade corridors and harmonisation of standards with neighbouring states to mitigate these disconnects, as isolated national action will prove insufficient.

Specifically, the entrenched informality of cross-border trade, while providing short-term livelihood resilience, ultimately obstructs the development of transparent and predictable price signals necessary for investment and stable supply. This suggests that policy should not seek to eradicate informal networks but rather to incrementally formalise them through simplified, pro-smallholder registration processes and the strategic deployment of market information systems. Such an approach would enhance the efficacy of regional trade protocols by grounding them in the lived realities of local traders and producers, thereby improving price co-integration.

Furthermore, the persistent focus on cashew as a mono-export crop illustrates a profound institutional failure to diversify agricultural production and value chains, leaving domestic food prices vulnerable to external shocks. Policy must therefore create incentives for food crop commercialisation by addressing critical energy infrastructure deficits that impede processing and storage, as reliable energy access is a foundational prerequisite for value addition and reduced post-harvest losses. This necessitates a deliberate alignment of agricultural trade policy with national energy strategy, recognising energy as a core input for transformative agro-processing.

Ultimately, the pathway to reform hinges on building adaptive institutions capable of fostering both regional market integration and domestic resilience. This requires moving beyond technical fixes to address the underlying governance challenges that stifle policy implementation and stakeholder coordination. By embedding principles of inclusivity and transparency within reformed trade and energy institutions, Guinea-Bissau can better harness regional markets to buffer against food price spikes, thereby converting trade potential into tangible food security and energy access gains for its population.

Recommendations

Building upon the identified policy implications, a critical reform pathway for Guinea-Bissau lies in the strategic prioritisation of its energy infrastructure to directly bolster regional market integration. Given the nation's acute vulnerability to food price volatility, investments must specifically target the modernisation of cold storage and processing facilities powered by renewable energy sources, thereby reducing post-harvest losses and enabling more consistent participation in regional trade. Concurrently, policy should incentivise the adoption of solar-powered irrigation systems to enhance domestic agricultural productivity and diversification, which is a foundational prerequisite for meaningful trade.

Such targeted energy interventions would strengthen Guinea-Bissau's position within regional value chains, moving it beyond a predominantly import-dependent stance and mitigating the adverse effects of price transmission on local food security. Furthermore, institutional capacity must be fortified to govern this evolving nexus between energy, trade, and food security. This necessitates the establishment of a dedicated inter-ministerial task force, integrating representatives from agriculture, trade, energy, and finance, to develop coherent policies that recognise these systemic linkages.

A primary function of this body should be to streamline and digitise customs and phytosanitary certification processes, reducing transaction costs and delays that currently impede cross-border trade. Strengthening these regulatory frameworks is essential for building trader confidence and ensuring that improvements in physical infrastructure translate into more efficient and transparent market operations. Finally, Guinea-Bissau should actively champion regional cooperation initiatives that align energy access with trade facilitation.

Diplomatically, the government must engage with regional bodies like the Economic Community of West African States (ECOWAS) to advocate for targeted funding and knowledge-sharing programmes focused on sustainable energy solutions for agricultural trade corridors. This includes supporting the development of regional renewable energy micro-grids that power border markets and storage hubs, a collective approach that would yield greater benefits than isolated national projects. By positioning itself as a proactive partner in these dialogues, Guinea-Bissau can leverage regional mechanisms to address its own institutional and infrastructural constraints, thereby enhancing its resilience to external price shocks and advancing long-term food security objectives.

Conclusion

This analysis has demonstrated that the persistent food insecurity and price volatility observed in Eastern Africa are not merely a function of production deficits or global market shocks, but are fundamentally rooted in fragmented regional markets and institutional weaknesses that impede efficient price transmission. The contribution of this policy brief lies in its explicit linkage of these institutional dimensions—spanning governance, trade policy, and market infrastructure—to the specific mechanisms of price formation and market integration, thereby moving beyond generic diagnoses to identify targeted reform pathways.

For Guinea-Bissau, a nation whose energy sector constraints critically undermine agricultural value chains, the most practical implication is that investments in off-grid renewable energy and cold storage infrastructure represent a foundational prerequisite for enhancing market access and reducing post-harvest losses, thereby strengthening domestic food availability before deeper regional integration can

be pursued. The recommended reform agenda, therefore, necessitates a dual-track approach that couples immediate, nationally focused capacity-building with sustained commitment to regional policy harmonisation. Guinea-Bissau's next step should be to champion the operationalisation of existing regional trade protocols within ECOWAS, while concurrently developing a national strategy for energy-for-agriculture initiatives that can be integrated into broader regional food security programmes.

This would position the country not merely as a beneficiary of regional cooperation, but as an active architect of a more resilient regional food system. Ultimately, the findings suggest that enhancing food security through trade is an institutional and political endeavour as much as an economic one. Future work must critically engage with the political economy of reform, examining the incentives and barriers faced by key actors in implementing the necessary policy changes.

The pathway forward for Guinea-Bissau and its regional partners hinges on translating this institutional analysis into concerted action, fostering a market environment where price signals reliably guide production and distribution to meet the nutritional needs of the population.

Contributions

This policy brief makes a distinct contribution by analysing the institutional dimensions of agricultural trade and food security through the specific lens of energy access in Guinea-Bissau. It provides novel empirical evidence on how energy deficits in 2021–2022 constrained regional market integration and price transmission mechanisms for staple foods.

The analysis identifies key institutional barriers within the energy-agriculture nexus and proposes targeted reform pathways. Consequently, it offers policymakers a practical, cross-sectoral framework to enhance regional trade resilience and food security by prioritising energy infrastructure and regulatory coherence.

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