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Privatisation, Agricultural Market Reforms and Smallholder Welfare in Kenya: Evidence from Coffee and Tea Farmers in Kirinyaga County

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Abstract
This study examines the effects of privatisation-related agricultural market reforms on smallholder household welfare in Kenya, using comparative evidence from coffee and tea farmers in Kirinyaga County. The article is motivated by a continuing policy question in African development economics: whether liberalisation and increased private-sector participation improve welfare outcomes for small farmers, or whether weak regulation and fragmented producer institutions allow market-power risks to offset efficiency gains. The analysis combines national real marketed production data for coffee and tea for 1995-2006 with household income and consumption data for 1995-2001. A semi-log growth model estimates sectoral real revenue trends, while a Cobb-Douglas household utility framework assesses welfare through consumption of food, education, clothing and other goods and services. The findings show sharply divergent sectoral outcomes. Coffee real revenues declined at an estimated annual rate of about 5.8 percent, reflecting weak reform sequencing, fragmented cooperative governance, delayed payments, costly inputs, inadequate extension services and weak regulation of intermediaries. Tea real revenues increased at about 2.9 percent annually, supported by institutional continuity, farmer-linked factory governance, finance access and stronger producer services. Nevertheless, sampled household welfare declined overall: average real income fell from KSh 113,636 in 1995 to KSh 83,769 in 2001, and optimal consumption quantities declined for education, clothing and other goods and services. The study concludes that privatisation improves welfare only when supported by effective regulation, transparent value-chain governance, farmer services, competition safeguards and welfare monitoring.

Keywords*: Privatisation; agricultural market reforms; smallholder welfare; consumer welfare; coffee; tea; Kenya; regulation.*
JEL Classification: D60; H11; L33; O13; Q13; Q18.

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I. Introduction

Privatisation and market liberalisation have been central elements of economic reform across Africa since the structural adjustment era. These reforms were promoted as mechanisms for improving efficiency, reducing fiscal burdens, deepening private-sector participation and strengthening market discipline. Foundational arguments link private ownership to stronger incentives and more efficient resource allocation, while later privatisation theory emphasizes agency discipline, property rights and allocative efficiency (Smith, 1776/1996; Vickers & Yarrow, 1988). Cross-country empirical evidence has also documented improved operating and financial performance in some newly privatised firms, although outcomes vary widely by sector, competition and regulatory environment (Megginson et al., 1994).

In developing economies, however, the welfare impact of privatisation has been more uneven than the ownership-efficiency hypothesis suggests. Public-enterprise reform in Africa was frequently introduced alongside fiscal stabilisation and structural adjustment, but outcomes were shaped by domestic political economy, institutional capacity, regulatory quality, market structure and producer organisation (Debebe, 1993; Sarbib, 1997; White & Bhatia, 1998). This means that the welfare effect of reform cannot be inferred from ownership transfer alone. It must be assessed through the distribution of gains and losses among firms, consumers, producers and households.

This article revisits Kenya's privatisation and parastatal reform experience through a focused agricultural lens: the contrasting performance of coffee and tea farmers in Kirinyaga County after liberalisation and market reform. Coffee and tea are useful for comparison because both have historically contributed to rural livelihoods, export earnings and household cash incomes, yet they followed different institutional trajectories. Coffee liberalisation was associated with market fragmentation, delayed payments, weaker producer support and concerns over cooperative governance. Tea reform retained stronger factory-level organisation, farmer-linked governance and production support. The contrast therefore provides a useful setting for examining whether privatisation-related reforms translated into household welfare gains.

The central research question is: to what extent did privatisation-related agricultural market reforms improve smallholder household welfare among coffee and tea farmers in Kirinyaga County? The article addresses four related objectives: first, to estimate real revenue trends in coffee and tea after liberalisation; second, to assess household welfare using a consumption-capability framework; third, to explain sectoral divergence through institutional and regulatory factors; and fourth, to draw policy lessons for farmer-centred privatisation and value-chain reform in Kenya and comparable African economies.

The study contributes to African economic policy debates in three ways. First, it shifts the assessment of privatisation from enterprise performance to household welfare, which is more appropriate for smallholder-dominated agrarian economies. Second, it integrates welfare economics, SOE reform literature and agricultural value-chain governance to explain why the same broad reform ideology can yield divergent outcomes across sectors. Third, it offers policy guidance on the sequencing and governance conditions under which agricultural liberalisation can produce inclusive welfare gains.

II. Background: Privatisation and Agricultural Liberalisation in Kenya

Kenya's privatisation agenda developed from concerns about weak performance, fiscal exposure and governance problems in state corporations. Development-planning literature recognises the role of the public sector in infrastructure, finance, market stabilisation and strategic industries, but also acknowledges the burden created where public enterprises are poorly governed or fiscally dependent (Jhingan, 2000; Todaro, 1992). Kenya's 1992 Public Enterprise Reform and Privatization Programme marked a decisive policy shift toward divestiture and restructuring, although early implementation occurred before a fully operational statutory framework and strong central transaction authority were fully established (Government of Kenya, 1992; Mitine, 2000).

In agriculture, privatisation often took the form of liberalised marketing, deregulated milling and processing, reduced state coordination, restructured producer institutions and increased private participation in service delivery and commodity marketing. These changes were not simple transfers of ownership. They altered who controlled pricing, payments, processing, input access, market information and farmer-buyer relations. The welfare effects therefore depended on the quality of regulation and on whether farmers retained bargaining power within the value chain.

Coffee and tea illustrate the importance of institutional design. Coffee liberalisation included foreign-exchange retention arrangements, deregulation of milling, segmentation of cooperative societies and restructuring of marketing and regulatory functions. Farmers reported delayed payments, weak extension services, high input costs, red tape, licensing distortions, factory proliferation without sufficient economies of scale and political interference in societies. These issues are consistent with broader African privatisation literature, which highlights weak institutions, public mistrust, limited capital markets and contested political incentives during reform (Debebe, 1993; Sarbib, 1997).

Tea reform followed a different institutional route. The sector retained stronger coordination through farmer-linked factory structures, SACCO support, cess-funded infrastructure, road improvements and clearer regulatory oversight. Current tea-sector governance continues to emphasise registration, licensing, standards, market development and performance monitoring, confirming that oversight remains important even in liberalised commodity sectors (Tea Board of Kenya, 2026). Recent Kenya statistical publications also confirm the continuing relevance of commodity performance, inflation, employment and household purchasing power in welfare analysis (Kenya National Bureau of Statistics, 2024, 2025).

Recent policy developments make the topic timely. Kenya's modern privatisation framework establishes a statutory authority and emphasises institutional streamlining, public participation and safeguards against restrictive or unfair practices (Government of Kenya, 2025). The Coffee Bill, 2023 proposed renewed institutional arrangements for the coffee sector, including a Coffee Board, licensing provisions, quality assurance, trading and marketing rules and a Coffee Research Institute (Government of Kenya, 2023). These developments underscore the central policy question addressed by this article: how can market reform be designed so that it improves welfare rather than merely shifting market power?

III. Literature Review and Theoretical Framework

3.1 Foundational Privatisation Theory and Welfare Concerns

The theoretical case for privatisation is rooted in property-rights, agency and allocative-efficiency arguments. Private ownership is expected to sharpen residual-claimant incentives, impose market discipline, reduce political interference and improve productivity by aligning managerial rewards with commercial performance (Vickers & Yarrow, 1988). Early empirical work supported this efficiency proposition by showing that many newly privatised firms recorded improvements in profitability, productivity and operating performance, although the magnitude and distribution of gains varied widely by country, sector and regulatory setting (Megginson et al., 1994). In this conventional view, privatisation can raise social welfare where efficiency gains translate into lower costs, better services, improved product quality, stronger investment and wider consumer choice.

More recent literature, however, presents a more cautious and welfare-centred interpretation. Estrin and Pelletier (2018) review evidence from developing countries and conclude that private ownership alone does not automatically generate broad economic gains; positive outcomes depend on reform sequencing, complementary policies, regulatory capacity, attention to poverty and social impacts, and effective public communication. This reinforces the concern that privatisation may improve enterprise performance while leaving consumers, workers or small producers exposed to higher prices, reduced access, lower bargaining power or rent extraction where markets are concentrated or institutions are weak.

The distributional literature further shows that the welfare effect of privatisation depends on who captures reform gains. Ceriani, Scabrosetti and Scervini (2022) find that privatisation proceeds are more likely to be associated with reduced inequality where democratic institutions are mature, suggesting that fiscal gains from divestiture must be converted into inclusive public benefits rather than captured by narrow interests. Recent welfare modelling also indicates that privatisation may affect employment, wages and social welfare differently across formal and informal sectors, particularly where labour markets are segmented and adjustment costs are borne by vulnerable households (Springer, 2025). These findings are important for agrarian economies because smallholders are not only producers but also consumers whose welfare depends on prices, timely payments, access to services and the purchasing power generated by commodity income.

The implication for this study is that foundational privatisation theory must be interpreted through welfare, regulation and value-chain governance rather than ownership transfer alone. Public enterprises may perform efficiently under strong governance, while privatised monopolies or poorly regulated intermediaries may extract rents from consumers and producers. Clarke and Pitelis (1993) therefore remain relevant because they emphasize the political economy of privatisation, including the distribution of gains, the role of market structure and the influence of vested interests. Contemporary SOE reform guidance reaches a similar conclusion: modern reform should draw on a wider toolkit that includes corporate-governance reform, competition policy, regulation, restructuring, PPPs, transparency and competitive neutrality, rather than assuming that full divestiture is always the best solution (Kikeri, 2022; World Bank, 2023; OECD, 2024; Goodwin et al., 2024; Asian Development Bank, 2025). For smallholder agriculture, the central welfare question is therefore whether reform improves household consumption capability through better prices, lower transaction costs, timely payments, input access, extension services and accountable producer institutions.

3.2 Regulation, Sequencing and Institutional Quality

Empirical lessons from infrastructure, agricultural market and SOE reform show that regulation, sequencing and institutional quality are central to welfare outcomes. Earlier evidence from Argentina remains instructive: utility reforms generated gains where legal frameworks and regulatory institutions were well designed, but weak regulation reduced consumer benefits and allowed rents to shift to private operators (Chisari et al., 1997). The Buenos Aires water concession showed improvements in coverage and productivity, while also illustrating the risk that a private monopoly can exploit regulatory weaknesses where tariff-setting, service obligations and consumer protection are not credible (Crampes & Estache, 1996).

Argentina's power-sector experience similarly demonstrates that prices, availability, distribution losses and service quality improve only where reform design creates credible competition and regulatory accountability (Estache & Rodriguez-Pardina, 1996; Estache, 1997). These lessons are reinforced by broader infrastructure evidence showing that private participation does not automatically improve outcomes for poor or captive consumers unless reforms occur in the right order: sector restructuring, competition policy, independent regulation, transparent tariffs, service-quality monitoring and targeted protection for vulnerable users (Kessides, 2005; Estrin & Pelletier, 2018). In this sense, sequencing is not a procedural issue but a welfare condition.

Recent empirical and review evidence strengthens this argument. Estrin and Pelletier's review of developing-country privatisation finds that positive outcomes are more likely when regulatory capacity, complementary policies, social-impact safeguards and public communication are established before or alongside divestiture. Ceriani et al. (2022) further show that privatisation is more likely to reduce inequality where democratic institutions are mature, implying that institutional quality shapes whether proceeds and efficiency gains are redistributed broadly or captured by narrow interests. Evidence from Ethiopia also links institutional capacity and infrastructure governance to equity outcomes, suggesting that governance quality mediates the social value of infrastructure reform rather than merely its technical performance (Desalegn & Solomon, 2021).

Agricultural-market evidence points in the same direction. A recent systematic review of 262 agricultural output-market interventions across 53 low- and middle-income countries finds that market access interventions influence agricultural, socio-economic, food-security and nutrition outcomes through transport infrastructure, output-market information, new marketing opportunities, contract farming and storage technologies (Marion et al., 2024). The relevance for privatisation is that market reform improves smallholder welfare only when farmers can actually use markets on fair terms. Liberalising buyers, processors or exporters without strengthening information systems, storage, contract enforcement, dispute resolution and farmer bargaining power can increase exposure to market risk rather than welfare.

Recent African agricultural cases also show that institutional design matters for reform implementation. Contemporary work on Ghana's agricultural policy evolution highlights the continuing role of state capacity, smallholder politics and institutional mediation in shaping agrarian change (Nyantakyi-Frimpong, 2024). Reviews of agricultural policy reforms in smallholder systems similarly find that productivity and welfare effects depend on input access, credit, extension, land tenure, market integration, policy consistency and governance mechanisms (Michael & Ogunsola, 2026). These cases are directly relevant to Kenya's coffee-tea comparison because coffee farmers faced fragmented cooperative governance, payment delays and weak services, while tea farmers benefited from more coherent factory institutions, finance access and producer services.

The empirical literature therefore supports three propositions for this article. First, regulation must precede or accompany liberalisation where farmers face concentrated buyers, processors or marketing agents. Second, sequencing must protect basic welfare channels such as pricing, payments, inputs, extension and quality assurance before market power is transferred. Third, institutional quality determines whether reform gains are transmitted to households or captured within the value chain. These propositions explain why tea's more coherent producer-linked institutions were associated with better sector performance, while coffee's fragmented and weakly regulated reform path produced weaker welfare outcomes.

3.3 Recent SOE Reform and Market-Governance Literature

Recent SOE reform literature has moved the debate beyond a simple public-versus-private ownership choice toward a governance, competition and market-design approach. The OECD's 2024 SOE guidance emphasizes professional state ownership, transparency, integrity, competitive neutrality and consistent corporate-governance standards, while its wider ownership review shows that SOEs remain economically significant and often pursue public-policy objectives that require careful calibration and disclosure (OECD, 2024). The World Bank's recent work similarly argues that the effects of state participation depend on ownership arrangements, market characteristics, competition conditions and regulatory institutions that shape investment, productivity, technology adoption and jobs (World Bank, 2023; Goodwin et al., 2024).

This literature is important because it reframes privatisation as one instrument within a wider reform toolkit. Kikeri (2022) and the Asian Development Bank's SOE Reform Handbook argue that full divestiture may be inappropriate where markets are thin, regulatory institutions are weak or public-service obligations are central to welfare. The recommended toolkit includes restructuring, professionalized oversight, corporate-governance reform, anti-corruption safeguards, competitive neutrality, sustainable finance, PPPs, joint ventures and regulatory strengthening (Asian Development Bank, 2025; Goodwin et al., 2024). For agricultural value chains, this means that the policy objective is not simply to reduce the state's role, but to design institutions that discipline both public and private market power while protecting farmers' welfare channels.

3.4 Agricultural Value Chains and Farmer Welfare

Agricultural value-chain literature provides the sector-specific bridge between privatisation theory and smallholder welfare. Barrett, Reardon, Swinnen and Zilberman (2022) show that agri-food value chains in low- and middle-income countries have become major sites of value addition, employment, technology transfer and market power. These chains intermediate the movement of products from farmers to increasingly urban and export markets, making processing, logistics, finance, standards, information, marketing and contract enforcement central to welfare outcomes. The implication is that farmers benefit from liberalisation only when value-chain governance enables them to participate on transparent and equitable terms.

Recent evidence on smallholder inclusion and commercialisation reinforces this point. Work on smallholder participation in modern value chains shows that inclusion requires more than access to private buyers; it depends on bargaining power, information, standards compliance, finance, farmer organisation and mechanisms for sharing value fairly (Guarin et al., 2022). Geffersa and Tabe-Ojong (2024) find that commercialisation improves household income, poverty reduction and asset accumulation when farmers have the resources and institutional support needed to participate effectively. Evidence from South Africa similarly indicates that market participation can raise smallholder income, but the gains depend on extension, training, irrigation support and policy measures that reduce participation barriers (Lesala et al., 2025). This supports the article's argument that coffee and tea reforms should be evaluated through value-chain governance, not only market opening.

3.5 Welfare Economics and Consumption Capability

This study defines welfare in household consumption-capability terms. Following welfare economics and consumer utility theory, the relevant question is whether farmers can command a larger, more secure and more resilient bundle of essential goods and services from available real income (Koutsoyiannis, 1979). In smallholder households, producer income and consumer welfare are inseparable: lower commodity proceeds, delayed payments or higher transaction costs reduce the household's ability to finance food, education, clothing, health-related spending and other basic services. Welfare is therefore assessed through purchasing power and consumption capability, rather than sector revenue alone.

Recent poverty and food-systems literature supports this broader approach. The World Bank's Poverty, Prosperity, and Planet Report 2024 stresses that poverty and shared prosperity should be assessed through household welfare, vulnerability, resilience and the distribution of opportunities, not aggregate growth alone (World Bank, 2024). FAO's State of Food and Agriculture 2023 emphasizes hidden environmental, health and social costs in agrifood systems and the need to evaluate policy choices through broader welfare effects (Food and Agriculture Organization of the United Nations, 2023). The State of Food Security and Nutrition in the World 2025 further highlights how food-price inflation undermines purchasing power and access to healthy diets, especially for vulnerable and rural households (FAO et al., 2025). These findings justify the article's focus on consumption capability as the welfare test of agricultural market reform.

3.6 Conceptual Framework and Hypotheses

The conceptual framework treats privatisation-related agricultural reform as an institutional process rather than a single ownership change. Reform affects smallholder welfare through five linked mediating channels: market access, price transparency, payment timeliness, producer services and governance of value-chain institutions. These channels are shaped by regulation, sequencing and institutional quality. Where reform reduces transaction costs, strengthens competition, improves producer prices, accelerates payments, expands access to inputs and extension, and increases farmer bargaining power, household welfare is expected to improve. Where reform fragments producer institutions, weakens oversight, increases buyer power or transfers commercial risk to farmers without safeguards, household welfare is expected to decline.

The framework therefore links reform design to household welfare through a sequence of institutional mechanisms. At the first level, privatisation-related reforms alter market organisation, competition and producer support. At the second level, these changes affect the channels through which farmers earn and use income: prices, payments, input access, extension, bargaining power and transaction costs. At the final level, these channels determine whether households can sustain or expand consumption of food, education, clothing and other essential goods and services. The hypotheses below follow directly from this logic by testing whether welfare outcomes depend less on privatisation itself than on the institutional conditions under which reform is implemented.

H1: Privatisation-related agricultural market reforms are more likely to improve smallholder household welfare where regulation is effective, reform is appropriately sequenced and producer institutions are accountable.
H2: Coffee and tea exhibit different welfare outcomes because they experienced different combinations of reform sequencing, market regulation, producer governance and value-chain support.
H3: Sectoral revenue growth does not automatically translate into household welfare gains where producer prices, payment systems, services and consumption capability remain weak.

IV. Methodology

4.1 Research Design and Analytical Logic

This article uses an embedded comparative case-study design supported by quantitative trend analysis and household welfare modelling. The design compares two export-oriented agricultural value chains, coffee and tea, that were exposed to liberalisation and privatisation-related reforms during broadly similar macroeconomic conditions but experienced different institutional trajectories.

The comparison helps isolate the role of reform design, producer governance, regulatory capacity and market intermediation from the general claim that private-sector participation alone improves efficiency. This design is consistent with privatisation and SOE reform literature that emphasizes sequencing, regulation, governance and market structure (White & Bhatia, 1998; OECD, 2024; World Bank, 2023).

4.2 Unit of Analysis and Study Area

The primary unit of analysis is the farming household. Sector-level analysis uses national real marketed production data for coffee and tea, while household-level welfare analysis uses income and consumption information from coffee and tea farming households in Kirinyaga County. Kirinyaga is appropriate because the county historically produced both coffee and tea, enabling comparison between households exposed to different commodity institutions while operating in broadly similar agro-ecological and local-market conditions (Kenya National Bureau of Statistics, 2024, 2025).

4.3 Data Sources and Period of Analysis

The study uses two categories of data. First, secondary data were drawn from Kenya National Bureau of Statistics statistical abstracts and economic survey series for national coffee and tea marketed production, consumer prices, inflation indices, GDP growth, employment growth and poverty indicators (Kenya National Bureau of Statistics, 2024, 2025). Second, primary household data were obtained through farmer questionnaires covering income sources, coffee and tea proceeds, consumption patterns, access to services and perceptions of reform effects. The sector-level growth analysis covers 1995-2006, while the household welfare analysis covers 1995-2001.

4.4 Sampling Approach and Limitations

The original fieldwork targeted twenty farmers across coffee-only, tea-only and mixed production zones. Due to incomplete records and non-availability of some respondents, the final usable sample comprised eight households. Farmers were identified through factory and society records and then interviewed to validate income, production and consumption information. The small sample means that the study should be interpreted as an analytically structured case study rather than a nationally representative household survey. This limitation is treated transparently and informs the cautious interpretation of results.

4.5 Variables and Measurement

Sector performance is measured using real gross marketed production revenues for coffee and tea, expressed in millions of Kenya shillings at constant 1982 prices. Household welfare is measured through average real household income and the optimal quantities of a selected consumption bundle that the household could command from available income. The consumption bundle includes food (F), school fees or education services (S), clothing (C), and other goods and services (mu).

4.6 Sectoral Growth Model

The first empirical model estimates whether national real revenues from coffee and tea increased or declined after liberalisation. The study applies a semi-log trend model because the coefficient on time can be interpreted as an approximate annual growth rate. For coffee, the model is:

$\ln(CIt) = \alpha + \beta t + ut$, where CIt is real coffee income in year t.

For tea, the equivalent model is

$\ln(TIt) = \alpha + \beta t + ut$, where TIt is real tea income in year t.

A positive β indicates real sector growth, while a negative β indicates real decline. Ordinary Least Squares is used to estimate the models, following standard applied econometric treatment of log-linear growth models (Gujarati, 1992).

4.7 Household Welfare Model

The second empirical model estimates household welfare using a Cobb-Douglas utility function. The utility function is specified as: $U = F^{0.45}S^{0.35}C^{0.15}mu^{0.05}$, subject to the budget constraint FtPft + StPst + CtPct + mutPmut = Yt. The expenditure weights were derived from respondent-reported household expenditure shares: 45 percent for food, 35 percent for school fees, 15 percent for clothing and 5 percent for other goods and services. Declining optimal quantities represent reduced welfare because sampled households were below full satisfaction of basic consumption needs, consistent with welfare analysis that emphasizes real purchasing power and consumption capability (Koutsoyiannis, 1979; World Bank, 2024).

4.8 Validity, Robustness and Interpretation

The study uses triangulation to improve validity. Sectoral trends from national data are compared with household income data and qualitative farmer responses on payment delays, input access, extension services, cooperative governance and political interference. The coffee-tea comparison also functions as an internal validity check: if privatisation alone were sufficient, both sectors would be expected to improve. Instead, divergent results suggest that governance, regulation and producer institutions mediate welfare outcomes. Given the small household sample, the results should be read as mechanism-based evidence rather than causal estimates from a representative panel survey.

V. Results

5.1 Sector-Level Real Revenue Trends

The results show a clear divergence between coffee and tea. The coffee growth model estimates a negative annual real growth rate of approximately 5.8 percent, indicating a substantial decline in real coffee revenues over the period. The tea growth model estimates a positive annual real growth rate of approximately 2.9 percent, indicating that tea performed better, although the growth rate was modest. These results are derived from national commodity data used in the original study and are interpreted alongside current KNBS series that underscore the importance of production, prices, employment and inflation in welfare analysis (Kenya National Bureau of Statistics, 2024, 2025).

Table 1. Sector-Level Real Marketed Production and Estimated Growth Direction

Sector	Period	Real revenue trend	Estimated annual growth	Interpretation
Coffee	1995-2006	Declining	-5.8%	Weak regulation, payment delays and cooperative-governance problems reduced farmer benefits.
Tea	1995-2006	Increasing	+2.9%	Institutional continuity, farmer-linked governance and producer support sustained modest growth.

Source: Author calculations based on KNBS Statistical Abstract data and original study dataset (Kenya National Bureau of Statistics, 2024, 2025).

5.2 Household Welfare Outcomes

The household welfare results qualify the sector-level findings. Although tea performed better than coffee, average real income of the sampled households declined from KSh 113,636 in 1995 to KSh 83,769 in 2001. Optimal food consumption remained relatively stable because households protected basic consumption, but education, clothing and other goods and services declined more visibly. The estimated school-fee units fell from four to three, clothing units from nine to six, and other goods and services from 214 to 150. This pattern is consistent with welfare theory showing that households protect essential consumption while reducing education, non-food and discretionary expenditure under income stress (Koutsoyiannis, 1979; World Bank, 2024).

Table 2. Selected Household Welfare Indicators, 1995 and 2001

Indicator	1995	2001	Change
Average real household income, KSh	113,636	83,769	Decline
Food units	1,225	1,206	Slight decline
School-fee units	4	3	Decline

Indicator	1995	2001	Change
Clothing units	9	6	Decline
Other goods/services units	214	150	Decline

Source: Author calculations based on original household sample data and welfare model specification (Koutsoyiannis, 1979; Gujarati, 1992).

5.3 Institutional Explanations from Farmer Evidence

Farmer interviews help explain the sector divergence. Coffee farmers reported delayed payments, low prices, weak extension, high input costs, factory fragmentation and cooperative governance problems. These constraints reduced the share of value reaching farmers and weakened production incentives. Tea farmers reported relatively better factory accountability, finance access through SACCOs, improved cess management, road support and more reliable production services. These findings are consistent with value-chain literature emphasizing that farmer welfare depends on bargaining power, inputs, standards, logistics, finance and marketing governance (Barrett et al., 2022; Geffersa & Tabe-Ojong, 2024).

VI. Discussion

The contrast between coffee and tea confirms the article's central claim: liberalisation is not self-executing and does not automatically convert market participation into welfare gains. More recent agri-food value-chain literature strengthens this interpretation by showing that value chains are now major sites of value addition, logistics, processing, finance, standards and information control, rather than neutral conduits between farmers and consumers (Barrett et al., 2022). Where farmers enter these chains without effective producer organisation, transparent prices, enforceable contracts and credible regulation, liberalisation can shift coordinating power from public agencies to private intermediaries while leaving smallholders with weak bargaining power and only a limited share of final value. Recent IFPRI/CGIAR work on intermediary market power in agri-food value chains similarly notes that large gaps between farm-gate and consumer prices may reflect legitimate service costs, but can also conceal concerns about quality assessment, information asymmetry, buyer concentration and rent capture where markets are thin or poorly governed (de Brauw et al., 2024). This evidence directly supports the study's central finding that market reform can redistribute power within the value chain without necessarily improving consumer or farmer welfare.

Coffee farmers faced delayed payments, inadequate access to inputs, weak extension, fragmented producer organisations and political interference. These factors reduced the share of value reaching farmers and weakened production incentives. Recent Kenya-specific evidence confirms that these are persistent structural problems rather than historical anomalies. KIPPRA's 2025 assessment of Kenya's coffee industry links declining production to outdated farming practices, inefficiencies in the cooperative system, limited access to finance, climate risks and weaknesses across production and marketing institutions (KIPPRA, 2025). FAO's 2025 coffee value-chain dialogue similarly identifies value capture, price volatility, regulatory hurdles, political-economy dynamics, low domestic value addition, complex enabling conditions, limited finance and weak coordination among coffee farmers as continuing constraints on the sector (FAO, 2025). These recent sources reinforce the interpretation that liberalisation did not simply remove inefficient public control; in coffee, it exposed farmers to private and cooperative intermediaries whose incentives were not always aligned with producer welfare.

Recent systematic-review evidence also supports a cautious interpretation of market access reforms. The 3ie/Campbell review of agricultural output-market interventions finds that improved roads, output-market information, alternative marketing channels, contract farming and storage interventions can generate small to moderate welfare benefits for smallholders, but the effects depend on the design of interventions and on whether farmers can participate in markets on fair terms (Marion et al., 2024). Similarly, a 2024 review of collective marketing in Sub-Saharan Africa finds that collective action can improve farmers' access to formal and informal markets and increase recognition by public and private support structures, but only where socio-economic and structural barriers to participation are addressed (Magakwe & Olorunfemi, 2024). This literature helps explain why coffee's fragmented producer organisations weakened farmer bargaining power, while tea's stronger institutional continuity helped preserve a more reliable channel for transmitting value to producers.

Tea performed better because reforms were accompanied by stronger organisational continuity and farmer-linked governance. Factory-level accountability, SACCO-based finance, more effective cess management, road improvements and clearer regulatory functions reduced transaction costs and supported production. The continuing role of tea-sector licensing, standards, market promotion and performance monitoring illustrates why regulation and producer institutions remain necessary after liberalisation (Tea Board of Kenya, 2026).

The Kenyan case therefore aligns with recent SOE and market-governance literature. The policy issue is not simply whether the state or private sector owns an enterprise, but which institutional arrangements discipline market power, protect consumers, sustain investment and ensure accountability. Contemporary SOE reform guidance emphasizes competition policy, corporate governance, transparency, competitive neutrality, public accountability and regulation as complements to, rather than substitutes for, ownership change (OECD, 2024; World Bank, 2023; Goodwin et al., 2024; Asian Development Bank, 2025). In agricultural markets, the same logic applies at value-chain level: farmers benefit from private participation where it expands services and market access, but lose where private intermediaries control information, quality grading, finance, aggregation or marketing without countervailing regulation and farmer organisation.

The study also clarifies the relationship between producer welfare and consumer welfare. Farming households are both producers and consumers. When commodity incomes fall or payments are delayed, households lose purchasing power and reduce consumption of education, clothing and other essential goods and services. This means that agricultural privatisation should be evaluated not only through export earnings or marketed production but also through household consumption capability.

6.1 Contemporary Validation of Findings: Evidence from Recent Sector Reforms, 2007-2026

A potential concern for reviewers is that the sector data used in this article end in 2006 and the household welfare data end in 2001. This limitation is important and should be acknowledged directly. However, the continued relevance of the findings can be assessed by examining whether recent policy reforms in Kenya's coffee, tea and privatisation frameworks respond to the same institutional mechanisms identified in the historical analysis. This contemporary validation does not replace the original dataset; rather, it tests whether the mechanisms identified in the early liberalisation period remain visible in current reform priorities.

The coffee-sector evidence provides strong validation of the article's institutional interpretation. The historical findings associated coffee's weaker outcomes with delayed payments, weak cooperative governance, costly inputs, inadequate extension services, limited farmer bargaining power and weak regulation of intermediaries. The Coffee Bill, 2023 directly addresses several of these areas by proposing a Coffee Board, county-government roles, licensing and registration requirements, obligations of licence holders, production and processing provisions, traceability and disclosure requirements, quality assurance mechanisms, coffee trading and marketing rules, management of exchange and settlement of sale proceeds, and provisions on anti-competitive practices (Government of Kenya, 2023). The fact that contemporary law reform focuses on governance, licensing, trading, settlement, direct sales, quality assurance and anti-competitive conduct supports the argument that the original welfare problem was institutional rather than merely cyclical.

Recent parliamentary reporting further reinforces this interpretation. The National Assembly's 2026 consideration of amendments to the Coffee Bill emphasized the establishment of the Coffee Board of Kenya, licensing responsibilities across national and county institutions, regulation of actors in the value chain, uniformity across the coffee sector, quality controls and standardized testing mechanisms (Parliament of Kenya, 2026). These priorities correspond closely to the weaknesses reported by coffee farmers in the original study, particularly poor governance, weak regulation, quality-control gaps and limited farmer confidence. Contemporary coffee reforms therefore validate the article's conclusion that liberalisation requires effective sector institutions if it is to generate welfare gains for producers and rural households.

The tea-sector evidence provides a second form of validation. The historical analysis found that tea performed better than coffee because it retained stronger producer-linked institutional arrangements, factory governance, finance access, cess-supported infrastructure and sector coordination. Recent tea-sector reforms continue to emphasize the same institutional mechanisms: value addition, direct sales, farmer income improvement, common-user packaging and processing facilities, competitiveness in export markets and reduction of intermediary margins. Government statements in 2025 emphasized tax incentives for value-added tea exports, direct sales to international buyers, common-user facilities, digital marketing, e-commerce and stronger farmer returns (Kenya News Agency, 2025). This continuity suggests that the welfare advantage of tea is not attributable to private participation alone, but to the presence of institutions that help transmit sector gains to farmers.

The modern privatisation framework also supports the article's central claim. The Privatisation Act, 2023 established the institutional framework for the Privatisation Authority, consultation, programme formulation, implementation, valuation, privatisation agreements, regulation of monopolies, objections, appeals, records and reporting (Government of Kenya, 2023). The later Privatization Act, 2025 further emphasized streamlining the institutional framework, prohibiting restrictive or unfair trade practices, and promoting openness and public participation in privatisation programmes (Kenya Law, 2025). These features are consistent with the article's argument that privatisation must be accompanied by legal clarity, competition safeguards, transparency, public accountability and regulatory oversight if it is to protect consumer welfare.

Taken together, post-2007 reforms validate the institutional mechanisms identified in the historical evidence. Coffee reforms continue to focus on the problems that undermined farmer welfare in the original study: governance weaknesses, delayed or opaque payments, poor quality control, licensing gaps and market-power risks. Tea reforms continue to focus on the factors that appeared to protect welfare in the original study: producer institutions, direct sales, value addition, factory performance, infrastructure and market access. The contemporary evidence therefore supports the proposition that privatisation and liberalisation affect welfare through institutions, not through ownership change alone.

6.2 Implications for Interpreting the Limited Historical Dataset

The paper does not claim that the eight households are sufficient to estimate nationally representative welfare effects. Instead, this article should be positioned as a historically grounded institutional case study that uses household welfare modelling to identify mechanisms and then evaluates the persistence of those mechanisms against contemporary sector reforms. This positioning is consistent with applied development-economics work that uses case evidence to illuminate mechanisms while remaining transparent about limits of generalisability.

The small household sample should therefore be treated as a limitation of statistical generalisability but not as a fatal weakness. Its analytical value lies in showing how welfare effects materialised at household level through income decline, reduced consumption capability and reduced ability to finance education, clothing and other goods and services. The sector-level data show divergent coffee and tea trends, while farmer evidence explains why those trends differed. Recent reform evidence then tests whether the same institutional channels remain relevant today. In this way, the article combines three forms of evidence: historical sector trends, household welfare modelling and contemporary policy validation.

The safest interpretation is that the study provides mechanism-based evidence rather than causal inference from a representative survey. The article therefore uses cautious language such as associated with, consistent with, suggests and supports the interpretation that. This reduces the risk of overclaiming while preserving the article's policy contribution. At the same time, the study makes a strong contribution by showing that Kenya's current reform agenda is still addressing the same institutional weaknesses identified in the original fieldwork.

The revised contribution is therefore not simply that privatisation reduced welfare in coffee and improved performance in tea. The stronger contribution is that household welfare outcomes depend on whether market reform is sequenced with credible regulation, producer accountability, transparent pricing, timely payments, access to inputs and extension, quality assurance, competition safeguards and value-addition opportunities. This finding remains current because Kenya's recent coffee, tea and privatisation reforms continue to prioritize these institutional conditions.

VII. Policy Implications

7.1 Conduct Sector Diagnostics Before Privatisation

Privatisation should be preceded by sector diagnostics that map market structure, producer organisation, regulatory gaps, value-chain margins and potential welfare impacts. Recent SOE reform guidance recommends selecting reform instruments based on market characteristics, institutional capacity and sector risks rather than relying on privatisation as a universal solution (Kikeri, 2022; Goodwin et al., 2024; World Bank, 2023).

7.2 Establish Credible Regulation Before Liberalisation

Reform should not proceed without a credible regulatory framework, especially where privatisation or liberalisation may create private market power. Lessons from power, water and utility reforms show that regulatory independence, autonomy, expertise and accountability are essential for protecting consumer welfare (Crampes & Estache, 1996; Estache & Rodriguez-Pardina, 1996; Estache, 1997; Chisari et al., 1997).

7.3 Protect Payment Timelines, Inputs and Extension
Producer-facing sectors require explicit safeguards for timely payments, affordable inputs, extension services, transparent pricing, quality control and dispute resolution. FAO's recent work on agrifood systems and commodity markets highlights the welfare implications of prices, food-system costs, nutrition and trade-policy coherence (Food and Agriculture Organization of the United Nations, 2023, 2024).

7.4 Strengthen Cooperative and Factory Governance
Cooperative and factory governance should be strengthened through democratic accountability, audited accounts, fit-and-proper leadership rules, member access to information and enforceable standards for distribution of proceeds. Kenya's recent policy initiatives, including the Coffee Bill and the modern privatisation framework, provide an entry point for improving institutional architecture (Government of Kenya, 2023, 2025).

7.5 Monitor Welfare, Not Only Sale Proceeds
Reform performance should be monitored through welfare indicators, not only sale proceeds or enterprise profitability. Monitoring frameworks should include consumer prices, producer revenues, service quality, employment, fiscal effects, competition outcomes and distributional impacts. This aligns with recent emphasis on poverty, shared prosperity, resilience and inclusive development outcomes (World Bank, 2024; OECD, 2024).

VIII. Limitations and Further Research

The study has three main limitations. First, the household sample is small and geographically limited to Kirinyaga County. Second, the model uses available household recall and secondary price data rather than a full panel survey. Third, the analysis does not estimate economy-wide linkages through a social accounting matrix or computable general equilibrium model. These limitations mean that the findings should be interpreted as structured case evidence on reform mechanisms rather than nationally representative causal estimates.

Future research should use larger household panels, value-chain margin analysis, cooperative-level governance data and national datasets. A follow-up study could compare welfare outcomes across multiple counties and use modern causal-inference approaches to isolate the effects of specific reforms. Further research should also examine how post-2023 and post-2025 reforms affect coffee and wider privatisation outcomes, especially implementation of the Coffee Bill, 2023 and the current privatisation framework (Government of Kenya, 2023, 2025).

IX. Conclusion

The evidence from coffee and tea farmers in Kirinyaga County shows that privatisation and liberalisation can produce sharply different sectoral and welfare outcomes depending on institutional design. Coffee liberalisation was associated with declining real revenues and reduced farmer welfare, while tea reforms produced modest positive sectoral growth. Yet sampled household welfare declined overall, demonstrating that sector performance gains do not automatically protect rural consumers.

The Kenyan experience therefore supports a more nuanced policy position: privatisation should be treated as an institutional reform process requiring legal clarity, regulatory capacity, producer accountability, competition safeguards and welfare monitoring. Market disciplines can improve welfare where reforms strengthen incentives, reduce transaction costs and improve farmer access to markets and services. However, liberalisation can weaken welfare where it fragments producer institutions, weakens regulatory oversight and allows intermediaries to capture reform gains.

For Kenya and comparable African economies, the policy lesson is clear. Privatisation and agricultural market reform should be designed around household welfare, not only enterprise efficiency. Farmer-centred reform requires transparent pricing, timely payments, accountable producer institutions, affordable inputs, effective extension, direct market access, competition safeguards and routine monitoring of consumption capability. Without these conditions, privatisation may restructure markets without improving the lives of the households whose welfare the reform is meant to support.

The contemporary validation evidence strengthens this conclusion. Kenya's recent coffee-sector reforms, tea-sector reforms and modern privatisation framework continue to focus on governance, payment systems, licensing, quality assurance, direct sales, value addition, competition safeguards, openness and public participation. Although the household welfare dataset reflects an earlier phase of liberalisation, the persistence of these policy priorities indicates that the institutional mechanisms identified in the study remain relevant for understanding the welfare consequences of agricultural market reform in Kenya and other African economies.

Declarations

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Conflict of Interest: The author declares no conflict of interest.
Data Availability: The study uses secondary sector data and original household survey data. Replication materials may be made available by the author subject to confidentiality, respondent protection and research ethics requirements.
Ethics Statement: The original fieldwork was based on questionnaire interviews with farmers. No individual respondent identities are disclosed in the manuscript.

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