

REPOA Brief



Accelerating Agricultural Transformation for Structural Change in Tanzania

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Key Messages

Agriculture employs about 65 per cent of Tanzania's workforce but accounts for only 26 per cent of GDP, indicating low labour productivity and slow structural transformation.

Frequent policy changes and market controls reflect short-term distributional interests, which undermine and discourage commercial farming and agro-processing, thereby weakening investment and value addition.

Growth in agriculture has primarily resulted from land expansion rather than productivity improvements, which increases pressure on land and heightens vulnerability to climate change.

Public expenditure in agriculture mainly funds short-term subsidies, with too little allocated to research, irrigation, and extension, thus misaligning with transformation objectives.

Medium-scale farms and agro-processors can foster upgrading by creating spillovers in technology, jobs, and market access, but they lack coordinated financial and infrastructural support.

Introduction

Tanzania has long pursued ambitious agricultural modernisation strategies, from surplus extraction under Ujamaa and liberalisation during structural adjustment to contemporary agro-industrial frameworks such as ASDP II, FYDP III, and Agenda 10/30. Throughout these phases, policy has consistently recognised agriculture as central to structural transformation, food security, and inclusive growth. In classical two-sector development models, rising agricultural productivity is expected to release labour and resources into manufacturing, creating a virtuous cycle of industrial expansion and income growth (Lewis 1954; Gollin 2014). However, Tanzania's sectoral outcomes have diverged from these expectations.

This note maintains a clear distinction between two related but non-synonymous concepts. "Structural transformation" refers to the economy-wide reallocation of labour and capital from lower-productivity to higher-productivity sectors—primarily from subsistence agriculture to manufacturing and modern services (Kuznets, 1955; Lewis, 1954). "Modernisation" refers to within-sector technological and institutional upgrading: the adoption of improved inputs, mechanisation, irrigation, or institutional capacity-building within agriculture itself. Modernisation of agriculture can support structural transformation by releasing labour and raising surpluses, but modernisation alone does not constitute structural transformation if intersectoral labour reallocation does not follow. This distinction is maintained throughout the note.

Despite sustained political and policy attention, productivity gains have remained modest, domestic value addition is limited, and linkages between agriculture and industry remain weak (World Bank, 2023). Agriculture still employs approximately 65 per cent of Tanzania's labour force while

contributing only 26 per cent of GDP—well above the 40 per cent employment threshold that benchmarking frameworks associate with economies yet to enter structural transformation (NBS, 2023; Dabla-Norris et al., 2013). Outcomes are therefore uneven and partial, reflecting persistent gaps between policy ambitions and implementation capacity. Agriculture still employs nearly two-thirds of Tanzania’s labour force and remains vital to food security, rural livelihoods, and export earnings (World Bank, 2023).

Recent studies suggest that structural transformation depends not only on market incentives but also on state capacity, human capital, institutional quality, and political economy dynamics, which together influence both policy implementation and the framing of agriculture–industry linkages (Acemoglu and Robinson, 2012; Osei et al., 2022). This note organises its analysis around four political-economy dimensions—interests, incentives, power relations, and ideational frameworks—which together explain how these dynamics constrain agricultural modernisation and its contribution to transformation (Osei et al., 2022; Rodrik, 2008).

This study examines how political incentives, institutional arrangements, and evolving development ideas have shaped Tanzania’s agricultural modernisation agenda and its contribution to structural transformation. It traces the evolution of agriculture–industry linkages across major political-economic regimes, analysing how shifts from state-led strategies to market-oriented and agro-industrial approaches have influenced policy priorities and implementation outcomes. In doing so, the study treats agricultural modernisation not simply as a sectoral objective, but as a core component of Tanzania’s broader development and transformation strategy.

Methodology

The study uses a mixed-methods approach. First, a review of industrial, agricultural, and trade policies was conducted to assess their coherence and consistency over time. Second, secondary data were analysed using a shift-share decomposition framework (McMillan et al., 2014) to examine sectoral employment and productivity trends, revealing patterns of structural change and the relative contributions of within-sector productivity growth versus labour reallocation. Third, primary data were gathered through ten key informant interviews (KIIs) with policymakers, private-sector actors, and development partners, offering insights into implementation processes, coordination challenges, and the political incentives shaping outcomes.

The study adhered to REPOA’s institutional research ethics protocols governing participant confidentiality, data protection, and voluntary informed consent. Finally, selected agro-industry value chains—horticulture, cashew, and agro-processing manufacturing—were analysed to demonstrate how political and institutional dynamics function in practice. Evidence from all four sources was triangulated using a structured comparison matrix, connecting KII insights to the four analytical dimensions and cross-referencing against quantitative indicators and policy-review findings.

Key Findings

Tanzania’s agricultural policies have been repeatedly reoriented to reflect shifting development priorities and economic conditions. A structured policy review reveals that agriculture policies have been dynamic since independence, all aimed at transforming the sector. Recent programmes have repositioned agriculture as a commercial and agro-industrial sector vital for employment creation, export growth, and poverty reduction. These successive reforms demonstrate ongoing political interest in transforming agriculture and an effort to adapt policies to changing constraints and opportunities over time.

However, from the perspective of ideational frameworks, each reform cycle has introduced new priorities—from Ujamaa collectivisation and parastatal marketing through to liberalisation under structural adjustment and now to agro-industrial corridor strategies—without building on lessons from predecessor reforms. This pattern of ideational instability, in which paradigms shift without evaluating what worked, undermines the credibility of policy commitments and discourages the long-horizon investment required for agricultural transformation. Limited institutional capacity, frequent programme redesigns, and weak coordination among agricultural, trade, and industrial policies have impeded implementation, leaving a persistent gap between ambitious reform agendas and actual productivity and value addition outcomes.

Agriculture remains dominant in employment but weak in productivity. Agriculture continues to absorb approximately 65 per cent of Tanzania's workforce and remains a key source of export revenue (Figure 1). Although its contribution to GDP declined in earlier decades, it stalled during the 2010s due to climatic shocks, price volatility, and limited productivity gains.¹ By the early 2020s, agriculture contributed approximately 26 per cent of GDP while employing two-thirds of workers—well above the 40 per cent agricultural employment benchmark that Dabla-Norris et al. (2013) associate with economies yet to enter structural transformation. The productivity decomposition analysis confirms that structural change contributed positively to labour productivity growth during 2006–2014, but negatively during 2014–2021, with all gains in the latter period arising from within-sector improvements rather than intersectoral reallocation (World Bank, 2023). This pattern confirms a trajectory of premature deindustrialisation—structural change driven by labour shifts into low-productivity services rather than agriculture-led industrialisation—limiting the scope for labour reallocation into higher-productivity activities without threatening food security and livelihoods.

Figure 1: Share of employment across sectors (% of total employment)



Source: World Development Indicators

Policy instability weakens incentives for commercialisation and value addition. Agricultural policy has experienced frequent shifts in pricing, trade controls, and subsidy regimes. Rapid changes to export rules, taxes, levies, and marketing arrangements heighten uncertainty and risk. KII respondents consistently highlight that this deters long-term investment by farmers, processors, traders, and financial institutions, especially in capital-intensive agro-industrial activities: "Policies change too often. Today exports are allowed, tomorrow there is a ban. Investors cannot plan in such

¹ Figure 1 includes construction, mining and quarrying, and utilities within "industry". Manufacturing alone accounted for approximately 3.3 per cent of total employment in 2023 (NBS, 2023), reflecting modest industrial absorption despite decades of industrialisation policy.

an environment." From a political-economy perspective, these interventions reflect the interests and incentives dimensions: they are frequently motivated by short-term food security or political objectives, responding to urban consumer pressures and government revenue needs rather than long-term investment signals. The result is a policy environment in which the credibility of investment commitments cannot be sustained across electoral cycles—a pattern documented in comparable African commodity sectors (Osei et al., 2022; World Bank, 2019). As a result, incentives tend to favour low-risk, subsistence-oriented production rather than market-driven upgrading. Underdeveloped standards enforcement, storage, and logistics create a paradox where farmers report "no market" while processors report "no reliable supply." Market failures persist along the value chain.

Productivity growth has relied on land expansion rather than intensification. Evidence from secondary data and policy review shows that the growth has mainly been driven by increases in cultivated land rather than consistent improvements in yields. Agricultural productivity remains low due to limited mechanisation, inadequate irrigation, weak extension services, and low adoption of modern inputs. Most smallholders still rely on rain-fed farming and traditional practices, with fragmented landholdings that limit economies of scale and technological progress. Although policy measures have expanded support in some areas, issues like financing constraints, institutional fragmentation, and uneven coordination have led to gradual rather than significant productivity improvements.

This pattern makes production vulnerable to climate variability and growing land pressure, while also limiting opportunities for cost reductions and competitiveness. The persistent reliance on extensive rather than intensive growth reflects limited access to inputs, restricted extension and research capacity, and insufficient investment in water and soil management. Agriculture remains highly exposed to climate shocks and price fluctuations. Poorly developed risk-management tools, such as irrigation buffering, insurance, climate-smart practices, and strategic reserves, heighten income instability, deter investment, and sustain a cycle of low productivity and vulnerability.

Public spending is misaligned with transformation objectives. Respondents agree that sustained public investment in roads, electrification, and digital connectivity is alleviating key structural bottlenecks. However, agricultural expenditure continues to prioritise short-term subsidies and crisis responses over investments that enhance productivity. Spending on research, extension, irrigation infrastructure, and market institutions remains insufficient compared to needs, and execution rates for development budgets are low. This bias reflects the incentives dimension: political actors face stronger electoral rewards from visible, short-term expenditures—fertiliser subsidies, food price controls—than from the long-horizon public goods (irrigation systems, research networks, extension services) that drive productivity-led transformation. As a result, agricultural policies have been more effective at stabilising consumption in the short term than at increasing productivity and strengthening agro-industrial linkages over time.

Weak agriculture–industry linkages constrain structural transformation. Despite agriculture's prominence in employment and exports, agro-processing remains limited and disjointed. Processors frequently depend on imported raw materials due to unreliable domestic supplies, while farmers have weak incentives to produce for industry because of price volatility, quality standards, and limited contract enforcement. This gap hampers the development of dependable value chains and diminishes opportunities for learning, economies of scale, and value addition. Consequently, structural change has mostly been driven by shifts into low-productivity services rather than by agriculture-led industrialisation.

Evidence from KIIs shows that overlapping mandates across agriculture, industry, trade, finance, and local governments create conflicting incentives, distort markets, and weaken value-chain planning: "Each ministry works on its own priorities. There is no strong mechanism to align agriculture, industry,

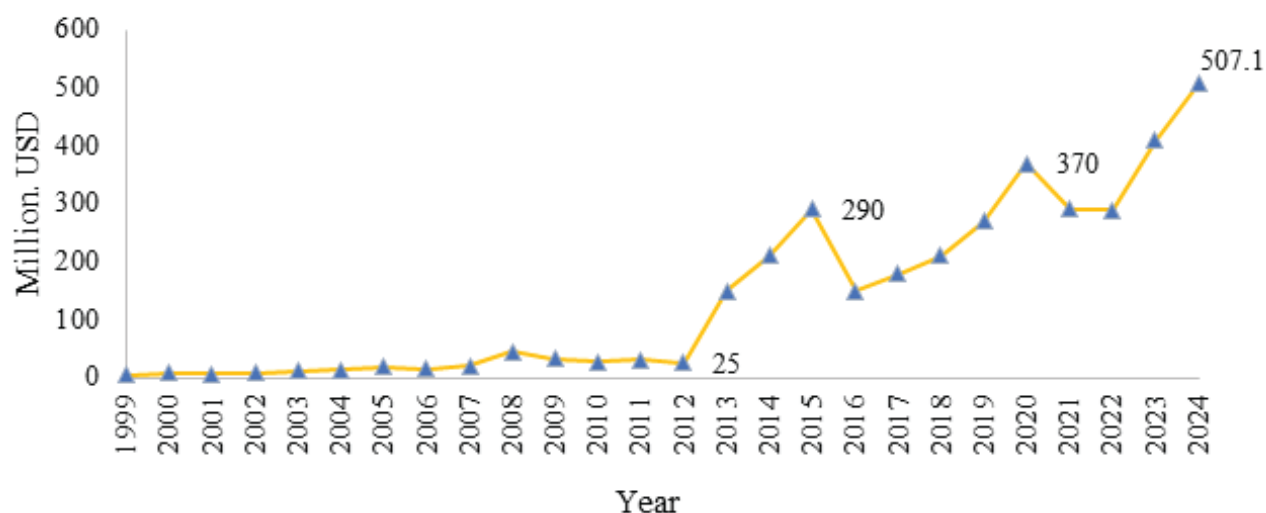
and trade policies." This fragmentation reflects the power dimension: no single institutional actor has the mandate or authority to enforce cross-sectoral coordination. Production, processing, and trade policies operate in isolation rather than as a cohesive system.

Agro-processing manufacturing illustrates the potential and persistent constraints of agriculture-linked industrialization. Tanzania's agro-processing and food manufacturing sub-sector represents the most immediate platform for manufacturing-led structural transformation, linking agricultural raw-material supply to industrial value addition. Food processing constitutes the largest single component of formal manufacturing output and employment, making it the natural intersection of agriculture–industry linkages. However, manufacturing's share of total value added increased only from approximately 7.5 per cent (1991) to 9.2 per cent (2023)—well below the 20 per cent GDP threshold associated with successful industrialisation (World Bank WDI). Labour productivity in manufacturing remains low at approximately USD 2,439 per worker in PPP terms, compared to the USD 10,000 benchmark for industrialising economies. Agro-processors consistently report domestic raw-material sourcing as a primary constraint—processors in the cashew sector, for example, operate at less than 30 per cent of installed capacity despite robust market demand. Addressing this coordination failure—which combines elements of the interests, incentives, and power dimensions—is central to realising agro-processing potential and underscores why agricultural modernisation cannot be pursued in isolation from industrial policy.

Medium-scale farms and agro-processors generate spillovers but remain under-supported. Rapid urbanisation, population growth, and rising incomes are also reshaping food demand toward processed foods, animal products, fruits, vegetables, and convenience foods. Medium-scale farms and organised agro-processors adopt improved inputs more widely, rely more on hired labour, and integrate more strongly into markets than smallholders. Yet smallholders, who produce the majority of output, remain weakly connected to commercial value chains due to poor rural infrastructure, limited access to finance and market information, and unequal bargaining power, keeping them largely in low-value primary production. This reflects the power dimension: farmers and small producers remain marginal in policy formulation, and decision-making remains top-down, leading to interventions that do not reflect local production realities. The growth of medium-scale farms and agro-processors is also constrained by restricted access to long-term finance, weak rural infrastructure, and insecure land arrangements.

Figure 2 shows horticulture export earnings, increasing from approximately USD 30.8 million in 2010 to an estimated USD 507 million in 2024. The sector supports approximately 4.5 million livelihoods—equivalent to roughly 22 per cent of total agricultural employment and about 9 per cent of the national workforce (Bank of Tanzania, 2025; NBS, 2023). The Tanzania Horticulture Association (TAHA) has been central to this performance by providing market intelligence, standards compliance support, cold-chain investment, training, and policy dialogue, demonstrating how institutional coordination can reduce export rejection rates and build credibility with international buyers. Through contract farming, out-grower schemes, and compliance with international standards, horticulture has achieved productivity gains, export diversification, and integration into global markets. While not all crops can replicate this model, it offers transferable lessons for coordination, quality upgrading, and public–private collaboration—particularly in managing the competing interests and incentives of farmers, processors, and export markets simultaneously.

Figure 2: Horticulture export earnings (in USD million)



Source: The Bank of Tanzania

Conclusion and Recommendations

Agricultural modernisation remains crucial to Tanzania's prospects for structural transformation because it supports food security, rural incomes, and the development of agro-industry. The evidence from this study shows that the main constraints are not a lack of policy intent or productive capacity but weaknesses in implementation, unstable policy signals, fragmented institutional responsibilities, and insufficient investment in productivity-enhancing systems. Three mutually reinforcing political-economy mechanisms explain the persistent gap between ambition and outcome: first, interests and incentives misalignment, where short-term distributional pressures drive episodic export bans and subsidy programmes rather than the long-horizon public goods that productivity-driven transformation requires; second, power fragmentation, where no single institutional actor has the mandate or authority to sustain cross-sectoral coordination across the agriculture–industry–trade nexus; and third, ideational instability, where successive reform paradigms have replaced rather than built on their predecessors, preventing the accumulation of institutional learning.

Therefore, advancing transformation requires shifting from isolated interventions to coordinated, continuous strategies that prioritise irrigation, mechanisation, research, and extension as public goods, while encouraging private investment through predictable, transparent policy frameworks. When combined with more effective mechanisms for market coordination and farmer inclusion, such an approach would enable agriculture to serve more effectively as a foundation for industrial development, employment creation, and inclusive growth, rather than remaining a sector of persistent vulnerability.

Below are key recommendations to accelerate transformation efforts.

Establish a stable and coordinated transformation framework. Past reforms showed that when producer prices were market-driven, and trade restrictions were removed, incentives improved, marketing efficiency increased, and private processing capacity grew. However, these benefits were weakened by fragmented governance and policy reversals, which reintroduced uncertainty and distorted incentives. A stable, legally grounded framework for agriculture–industry transformation aligned with Vision 2050 is necessary to reinforce market-based incentives while avoiding ad hoc export bans and policy shifts. Strengthening central coordination across agriculture, industry, trade,

infrastructure, and finance would prevent conflicts like those seen when liberalised export crop markets damaged domestic manufacturing supply. Stability and coordination are essential to rebuild investor confidence and support long-term investments in machinery, skills, and processing capacity.

Increase public support for expansion to productivity and competitiveness. The availability of competitive markets has raised producer prices and stimulated output growth, but much of this expansion relied on area expansion rather than intensification, leaving yields low and exposing farmers to land pressure and climate risk. Input use increased in high-potential zones, yet private input markets struggled to replace the credit and coordination functions once performed by cooperatives and parastatals. Public spending should therefore prioritise productivity-enhancing public goods, irrigation, soil fertility management, quality seed systems, and mechanisation services, rather than short-term subsidies. Public investment in the factors of production—land improvement, irrigation infrastructure, human capital development, and technology systems—must be treated as complements to, not substitutes for, physical connectivity investment (Johnston and Mellor, 1961; Sawada, 2023). Stronger research–extension–farmer linkages are needed to translate market incentives into sustained yield growth. Treating farmers as entrepreneurs requires complementing market prices with reliable access to technology and knowledge, while social protection should address vulnerability without distorting production incentives.

Deepen agriculture–industry linkages through value chain coordination. Weak integration between farmers and processors limits domestic value addition and technological learning. Value chains should be planned to start from market demand, aligning production volumes and quality with processor and export specifications. Contract farming, nucleus–outgrower schemes, and professionally managed cooperatives can reduce coordination failures if supported by transparent pricing, enforceable contracts, and quality improvements. Warehouse receipt systems and forward contracts need stabilisation to lessen price risk and enhance access to finance. Processors should be encouraged to source locally, alongside support for farmers to meet standards and consistency requirements. The horticulture sector's experience—where TAHA's institutional coordination model grew export earnings from USD 30.8 million (2010) to USD 507 million (2024)—demonstrates the transformative potential of coordinated value-chain development and offers a replicable model for other agro-industrial sub-sectors (Bank of Tanzania, 2025).

Strengthen local institutions, finance, and market governance. Implementation failures indicate weak local capacity, limited farmer participation, and shallow market institutions. Extension services need to be rebuilt with both technical and commercial skills, while policy design should adopt a more bottom-up approach, involving local governments, farmer organisations, SMEs, and processors—reflecting farmers' and small producers' interests in policy formulation rather than the current top-down model. Agricultural and agro-industrial finance must evolve beyond short-term credit to value-chain-based lending, machinery leasing, and risk-sharing instruments. Simultaneously, regulatory and tax systems should be simplified by reducing overlapping levies, improving VAT refund and licensing processes, and replacing export bans with transparent, predictable trade rules. These reforms would lower transaction costs and decrease the perceived risk of investing in upgrades.

Build climate-resilient and inclusive production systems. Climate vulnerability now acts as a structural barrier to transformation by discouraging long-term investments and increasing income volatility. Scaling up climate-smart agriculture, through water harvesting, drought-tolerant seeds, soil management, and early-warning systems, is essential for stabilising production and bolstering agro-processing supply. Livestock systems should be more fully integrated into the modernisation agenda through investments in dairy, meat, and hides-and-skins value chains, as well as mixed crop–livestock systems. Inclusion must be explicit: youth and women need secure access to land, finance, skills, and technology if agriculture and agro-industry are to absorb labour effectively and reduce poverty.

Methodology

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