SECTOR DEEP-DIVE NOTE:

EXPORT DIVERSIFICATION AND STRUCTURAL TRANSFORMATION ACROSS ENERGY, MANUFACTURING AND AGRICULTURE

Rwanda

SUMMARY

strong growth of
9.8%
in 2025

Structural transformation & long-term growth

Rwanda's structural transformation and long-term growth depend on its ability to diversify exports and expand domestic value addition across key sectors. While the economy has sustained strong growth of 9.8% in 2025, it remains characterized by a narrow export base and significant external imbalances, with imports exceeding domestic exports by more than four times (US$ 1.54 billion vs. US$ 375 million in Q4 2025). This highlights the urgency of shifting toward a more resilient, export-driven growth model anchored in higher-productivity activities.

High energy costs, estimated at
20–30%

Energy

Energy plays a critical enabling role in this transition. Although electricity access has expanded significantly to about 78% of households, challenges related to affordability, reliability, and productive use continue to constrain industrial competitiveness. High energy costs, estimated at 20–30% above regional averages and supply limitations particularly affect export-oriented sectors such as agro-processing and manufacturing. Strengthening energy systems to support productive uses, including industrial parks, cold chains, and irrigation, is therefore essential for enabling value addition and export growth.

9%
of GDP

Manufacturing

Manufacturing remains underdeveloped relative to its potential, contributing about 9% of GDP and a limited share of exports. However, it offers strong opportunities for transforming raw materials into higher-value products, strengthening industrial linkages, and creating jobs. Expanding agro-processing, light manufacturing, and emerging industries such as pharmaceuticals can significantly enhance domestic value capture and support Rwanda's integration into regional markets, particularly within the EAC and AfCFTA frameworks.

employing
60%
of the workforce

Agriculture

Agriculture continues to be the backbone of the economy, employing over 60% of the workforce but characterized by low productivity, limited commercialization, and high vulnerability to climate shocks. Transitioning toward a more productive, market-oriented, and climate-resilient agri-food system is essential for supporting agro-processing and export diversification.

KEY HIGHLIGHTS

- Rwanda's economy remains high-growth (9.8% in 2025), with a trade deficit exceeding ration of 4:, underscoring the need for export diversification.
- The export base is still narrow and commodity-dependent, exposing the economy to external shocks and limiting domestic value addition.
- Energy access has reached 78%, but high tariffs (20–30% above regional averages) and reliability constraints continue to limit industrial competitiveness and export growth.
- Manufacturing contributes only 9% of GDP and less than 20% of exports, indicating significant untapped potential for value addition and job creation.
- Agriculture employs over 60% of the workforce but remains low-productivity, with constraints in irrigation, mechanization, and market integration.
- Post-harvest losses (20–30%) and weak logistics systems reduce agricultural value capture and export readiness.
- Rwanda's transformation requires a shift toward value-added sectors, agro-processing, light manufacturing, and high-value agriculture.
- Sector integration is critical where energy enables production, manufacturing drives value addition, and agriculture supplies inputs none can transform independently.
- Regional markets (EAC and AfCFTA) offer strong opportunities for export expansion in niche, high-value products.
- The strategic priority is to move toward a diversified, export-driven, and green growth model, supported by productive infrastructure, firm upgrading, and coordinated policy implementation.

1. INTRODUCTION

Export diversification and structural transformation are central to Rwanda's long-term development agenda. Rwanda as a landlocked economy, sustained growth cannot rely heavily on a narrow export base dominated by a limited range of traditional commodities and low-value-added activities. Structural transformation requires shifting resources, investment, skills, and technology from low-productivity sectors into higher-productivity activities, while export diversification requires broadening the range of products and services the country sells competitively to regional and

global markets. These two processes are mutually reinforcing: a more diversified production base supports a more resilient export basket, while expanding export opportunities creates incentives for firms to upgrade, innovate, and move into more sophisticated sectors.

Rwanda has made important progress over the last two decades through macroeconomic stability, improved governance, infrastructure investment, and a stronger business environment. The economy still faces structural constraints that limit the pace of transformation. Agriculture remains a major employer but productivity is uneven and value addition remains limited. Manufacturing has expanded, but it is still relatively small and concentrated in light industry serving domestic and regional markets. Energy access and reliability have improved, but energy costs, quality of supply, and industrial power needs remain binding constraints for large-scale industrialization and export competitiveness. As a result, Rwanda's export basket remains concentrated in a few traditional commodities and services, leaving the economy likely vulnerable to price fluctuations, climate shocks, logistics costs, and external demand volatility.

A sector deep-dive into energy, manufacturing, and agriculture is therefore critical because these sectors sit at the heart of the transformation agenda. Agriculture provides the base for rural incomes, food security, agro-processing, and export-oriented value chains. Manufacturing serves as the bridge from primary production to higher-productivity jobs, domestic value addition, and regional export penetration. Energy underpins both sectors by determining the cost, scale, and quality of production. Together, these sectors can drive a new phase of growth based on productivity, competitiveness, and resilience.

2. WHY EXPORT DIVERSIFICATION MATTERS

Export diversification in Rwanda is not simply about expanding the number of products exported; it is fundamentally about transforming the structure of the economy toward higher-productivity, more resilient, and value-adding activities. Rwanda's export base, in 2025 remained highly concentrated in a few primary commodities particularly coffee, tea, and minerals making the economy likely vulnerable to external shocks. In 2025, Q4, domestic exports declined sharply by **44.6%** year-on-year, falling from **US$ 677.45 million** in Q4 2024 to **US$ 375.43 million**, while also declining by **3.7%** compared to Q3 2025[1]. Such volatility reflects exposure to fluctuations in global commodity prices, demand shifts, and supply constraints. Although re-exports increased significantly by **26.2%** year-on-year and **28.8%**[2] quarter-on-quarter, they remain largely transit trade with limited domestic value addition. This underscores the urgency of diversifying into sectors that generate stable and higher domestic value.

Export diversification is also critical for addressing Rwanda's persistent structural trade imbalance. total trade reached **US$ 2.14 billion**, with imports at **US$ 1.54 billion** significantly outweighing domestic exports of **US$ 375.43 million**, alongside **US$ 223.72 million** in re-exports(NISR, 2025). Imports increased by **12.7%** compared to Q3 2025, despite a modest annual decline of **5.3%**, reflecting continued strong demand for capital goods, fuel, and intermediate inputs (NISR, 2025). This widening gap between imports and exports reinforces a structurally large trade deficit and ongoing pressure on the current account, estimated at around **10–12%** of GDP. As Rwanda sustains strong growth, of **9.8%** in 2025, import demand remain elevated, making it imperative to expand higher-value exports in agro-processing, manufacturing, and modern tradable services to strengthen external sustainability.

Trade patterns further highlight the need for strategic diversification. Rwanda's exports remain regionally concentrated, with the Democratic Republic of Congo (DRC) as the dominant destination,

1 NISR, Formal External Trade, 2025

2 NISR, Formal External Trade, 2025

alongside China, the United Arab Emirates, Egypt, and Uganda. Notably, the DRC alone accounted for 83.98% of Rwanda's re-exports, indicating heavy reliance on a single regional market. On the import side, Rwanda's dependence on external supply chains is evident, with China, Tanzania, India, Kenya, and the UAE as the main sources of imports. The composition of re-exports, dominated by Food and live animals (US$ 69.44 million) and mineral fuels and lubricants (US$ 56.85 million)[3], further reflects Rwanda's role as a regional trading hub rather than a high-value production center. This trade structure highlights the need to shift toward domestically produced, value-added exports with broader market reach.

Further, beyond macroeconomic stability, export diversification remains central to job creation and productivity upgrading. Agriculture still employs over 60% of Rwanda's workforce, while manufacturing contributes about 20–22% of GDP but remains underrepresented in exports. The current export structure limits domestic value capture and weakens linkages across sectors. Expanding into diversified and value-added sectors, such as agro-processing, horticulture, textiles and garments, pharmaceuticals, and light manufacturing, can significantly increase employment and productivity. These sectors generate jobs across entire value chains, including production, processing, logistics, packaging, quality control, and trade facilitation. In this context, export diversification is not only a tool for foreign exchange generation but a core pillar for achieving Rwanda's structural transformation, reducing vulnerability, and sustaining inclusive growth.

The composition of re-exports, dominated by **Food and Live animals**

US$ 69.44 million

Mineral fuels and **Lubricants**

US$ 56.85 million

3. STRUCTURAL TRANSFORMATION IN THE RWANDA CONTEXT

Rwanda has made steady progress in advancing structural transformation, with the process uneven across sectors. There has been a gradual shift toward more productive activities, with full reallocation of resources and capabilities toward higher-value, export-oriented sectors. Strengthening this transition will be critical to sustaining growth and improving economic resilience. The agriculture sector that employs over **60%** of the workforce, yet still, contributes only about **23–24%** of GDP, reflecting persistent productivity gaps. The sector is largely dominated by smallholder farming systems characterized by fragmented landholdings, heavy reliance on rain-fed production, limited mechanization, and uneven adoption of modern inputs. At the same time, the industrial sector contributes approximately **21–23%** of GDP, driven largely by construction and emerging manufacturing activities, but its contribution to exports and employment remains relatively modest. Services have become the dominant sector, accounting for roughly **46–50%** of GDP in 2025, with strong growth in trade, transport, ICT, tourism, and finance. It should be noted that services-led growth alone cannot sustain long-term transformation unless it is anchored in a productive base capable of generating tradable goods and export revenues.

3 *NISR, Formal external Trade 2025*

The next phase of transformation requires strengthening productive capabilities, increasing domestic value addition, upgrading firm-level competitiveness, and enhancing skills across the labor force. It also requires better integration of rural production systems into industrial value chains and export markets. A shift toward higher-value sectors such as agro-processing, manufacturing, and modern tradable services is required. At the same time, transformation needs to be green, inclusive, and resilient, as climate variability, energy transition pressures, and evolving global market standards increasingly demand sustainable, traceable, and low-carbon production systems.

In this context, energy, manufacturing, and agriculture should be viewed as an integrated transformation system rather than separate policy domains. Affordable and reliable energy is a critical enabler of industrialization, supporting processing, cold storage, irrigation, and digital supply chains. Manufacturing serves as the bridge between primary production and export diversification, increasing domestic value addition and creating employment. Agriculture, as the backbone of rural livelihoods, provides inputs for agro-processing and generates marketable surpluses that feed into industrial and export value chains. The interdependence of these sectors is evident. Weak agricultural productivity constrains industrial inputs, high energy costs undermine manufacturing competitiveness, and limited industrial capacity reduces value addition from agriculture. The central policy challenge is therefore to align these sectors within a coherent, export-led transformation strategy that accelerates productivity growth, reduces structural imbalances, and strengthens Rwanda's long-term economic resilience.

4. SECTOR DEEP-DIVE: ENERGY

Energy remains a foundational enabler of export competitiveness and structural transformation in Rwanda. Over the past decade, electricity access has expanded significantly, from **34%** in 2017 to approximately 78% in 2025, comprising about **61%** on-grid and **17%** off-grid connections[4]. Installed generation capacity has increased to over 406 MW by 2025, reflecting sustained investments in diversified energy sources[5].

The energy mix is relatively balanced, with hydropower accounting for approximately **45–50%**, methane gas from Lake Kivu contributing about **25–30%**, peat and thermal sources representing **15–20%**, and solar energy accounting for roughly **5–10%** of total generation capacity[6].

While these gains have significantly improved access and supply capacity, the next phase of reform needs to prioritize energy quality, cost competitiveness, and productive use. Industrial electricity tariffs in Rwanda remain relatively high, estimated at 30% above regional averages, which continues to constrain competitiveness

4 Rwanda Energy Group (REG), Energy Access Statistics and Reports, 2024–2025
5 Rwanda Energy Group (REG), Startegic Plan 2024-2034.
6 Rwanda Energy Group (REG), Energy Access Statistics and Reports, 2024–2025

in energy-intensive export sectors[7]. More efforts are required to adrress these constraints to enable industrial parks, agro-processing zones, cold-chain systems, and logistics infrastructure that underpin export diversification and structural transformation.

The cost and reliability of energy remain key determinants of firm-level competitiveness in Rwanda. While electricity supply reliability has improved in recent years with outage frequency declining by an estimated 15–20% over the past five years, firms still report challenges related to voltage instability and localized outages, particularly outside major urban and industrial zones[8]. These constraints are especially binding for energy-intensive and quality-sensitive sectors such as agro-processing, pharmaceuticals, packaging, and light manufacturing, where uninterrupted power is critical for refrigeration, processing, and compliance with export standards. Thus, energy inefficiencies continue to increase operational costs, reduce capacity utilization, and weaken Rwanda's attractiveness as a destination for export-oriented investment.

Energy also plays a critical role in enabling spatial and sectoral transformation. Currently, a significant share of industrial activity remains concentrated in Kigali, while secondary cities and rural production zones face gaps in reliable productive energy access. Expanding electricity infrastructure to industrial parks, special economic zones, and secondary growth corridors can support decentralized industrialization and reduce spatial imbalances. In addition, scaling up productive energy applications, including cold storage systems, irrigation powered by solar and mini-grids, and decentralized agro-processing, can help address inefficiencies across value chains. For instance, post-harvest losses in perishable agricultural products remain high, estimated at **30%**, partly due to limited cold-chain infrastructure linked to energy constraints[9]. This highlights the need to shift policy focus from energy access alone toward productive and value-adding uses of energy.

Aligning energy investments with priority sectors will be central to accelerating structural transformation. Rwanda's energy strategy increasingly emphasizes diversification toward lower-cost renewable sources, with renewables already accounting for over **50%** of installed capacity, helping to reduce long-term generation costs and improve sustainability. Targeted investments in industrial energy infrastructure, combined with efficiency improvements and cost-reflective yet competitive tariffs, can significantly enhance productivity and competitiveness. In this context, energy should be treated not only as a public service but as a strategic economic input, critical for enabling industrialization, increasing domestic value addition, and supporting a more diversified and resilient export economy.

7 World Bank, Rwanda Economic Update (2024)

8 Rwanda Energy Group (REG), Energy Access Statistics and Reports, 2024–2025

9 FAO, 2024

4.2 Key constraints in the energy sector

Despite major progress, some constraints still limit energy's contribution to export diversification.

a. First, the cost of electricity remains a major issue for industrial competitiveness. Even where supply has improved, relatively high tariffs and operational costs can discourage energy-intensive manufacturing and reduce margins for processors competing in regional and international markets. Rwanda's landlocked geography and relatively small domestic market further increase the importance of lowering production costs wherever possible.

b. Second, reliability and quality of supply remain critical concerns, particularly for firms requiring continuous production. Intermittent outages, voltage fluctuations, or weak last-mile industrial connections can have disproportionate effects on modern production systems. Export firms often face stricter compliance standards and tighter delivery timelines, so energy instability translates into commercial risk.

c. There is still a gap between access expansion and productive use. Household electrification has important social and welfare benefits, but structural transformation requires more deliberate efforts to connect power to productive sectors. This includes industrial parks, SME clusters, irrigation schemes, agro-processing centers, cold rooms, and digital logistics systems. Without stronger productive demand, the economic returns to energy investment may remain below potential.

d. The broader energy mix and dependence on imported fuels also affect competitiveness. Fuel imports raise transport and production costs across the economy, especially in logistics-heavy sectors. Export diversification thus depends not only on electricity policy but also on broader energy transition measures that reduce fuel vulnerability through renewable energy, electric mobility, energy efficiency, and localized energy solutions.

4.3 Opportunities for transformation through energy

Rwanda has several opportunities to use energy more strategically for export-led growth. One important pathway is to strengthen renewable energy deployment linked to productive sectors. Decentralized energy systems, mini-grids, and embedded generation can support agro-processing centers, rural cold chains, irrigation, and SME manufacturing in areas where grid supply may be insufficient or costly. This initiative can unlock local production and reduce post-harvest losses while improving the viability of export-oriented agricultural value chains.

A major opportunity lies in aligning energy planning with industrial policy. Instead of treating electricity expansion and industrial development separately, Rwanda can target power investments toward sectors and zones with the greatest export potential. Industrial parks, special economic zones, logistics hubs, and agro-industrial clusters require dedicated power solutions tailored to production needs. This integrated planning can improve investment efficiency and crowd in private sector participation.

Energy efficiency also offers significant gains. Many firms operate with outdated equipment, inefficient motors, weak energy management systems, and high fuel dependence. A national push for industrial energy efficiency could lower production costs, improve competitiveness, and reduce emissions. For export markets that increasingly value green production, energy-efficient manufacturing and low-carbon agro-processing can become a market advantage rather than only a compliance requirement.

4.4 Policy directions for the energy sector

The energy agenda for export diversification should focus on three linked priorities: affordability, reliability, and productive use.

i. First, tariff structures and financing models should be reviewed to improve competitiveness for productive sectors without undermining utility sustainability. This may require targeted instruments for strategic export sectors, blended finance for industrial energy infrastructure, and more efficient generation and transmission investments.

ii. Investment in grid quality and industrial reliability must be strengthened. This includes network modernization, better maintenance, improved distribution infrastructure for industrial users, and stronger service standards in growth corridors and production zones.

iii. Finally, productive energy use should become a central planning objective. Public investment, private participation, and development finance should be directed toward energy applications that directly support processing, value addition, irrigation, cold storage, digital trade, and logistics.

iv. In the medium term, Rwanda can position energy not only as an enabling factor but also as a source of green competitiveness. As global buyers increasingly emphasize carbon footprints, traceability, and sustainability, firms that can demonstrate lower-emission production may gain market access and pricing advantages. This creates an opening for Rwanda to combine industrial upgrading with green transformation.

5. SECTOR DEEP-DIVE: MANUFACTURING

5.1 Strategic role of manufacturing in export diversification

Manufacturing plays a central role in Rwanda's export diversification and structural transformation by enabling value addition, productivity growth, and job creation.The industrial sector contributed about **22%** of GDP in 2025, while manufacturing accounted for approximately **8.9%** of GDP(NISR, 2025), indicating that its relative weight remains modest compared to its strategic importance. With recent growth observed, manufacturing exports still represent a limited share of total domestic exports, estimated at **20%** with the export basket continuing to be dominated by primary commodities. This gap highlights the urgency of expanding manufacturing capacity to shift Rwanda toward higher-value, export-oriented production.

Recent performance trends show positive but still gradual industrial expansion. Manufacturing output grew by about **5.5%** in 2025, with overall industrial production increasing at an annual average of 6.5%, reflecting steady but moderate progress. In stronger growth periods, manufacturing

expansion reached 14% in Q3 2025, driven by increased production in construction materials, chemicals, and food processing (NISR, 2025). These trends indicate that manufacturing has the potential to accelerate but remains constrained by structural bottlenecks, including high production costs, limited scale, and low technological intensity. The strategic importance of manufacturing lies in its ability to transform primary outputs into higher-value products and increase domestic value capture. In Rwanda's context, this includes agro-processing, light manufacturing (textiles, garments, packaging), and emerging sectors such as pharmaceuticals and construction materials. However, a significant share of agricultural output is still exported or consumed with limited processing, constraining export sophistication and value addition.

Manufacturing also strengthens economic linkages and industrial ecosystems. Growth in the sector stimulates demand across supply chains, including agriculture, transport, logistics, packaging, and business services. However, Rwanda's manufacturing base remains relatively shallow, with many firms operating at small scale and facing constraints related to access to finance, technology, and markets. At the regional level, manufacturing offers Rwanda a strategic opportunity to leverage growing demand within the East African Community (EAC) and the African Continental Free Trade Area (AfCFTA). Industrial growth of around 11-17% in 2025, highlights increasing momentum in the sector. Rwanda can position itself competitively in niche manufacturing segments where quality, responsiveness, and regional proximity matter more than scale. However, to fully capture these opportunities, the sector must improve productivity, expand export capacity, and meet international standards. Accelerating manufacturing development will be critical for diversifying exports, increasing domestic value addition, and strengthening Rwanda's external position. This requires targeted investments in industrial infrastructure, skills development, and technology upgrading, alongside policies that enhance firm competitiveness and integration into regional and global value chains.

5.2 Current challenges facing manufacturing

Manufacturing in Rwanda still faces several structural challenges that limit its scale and export orientation.

- One major constraint is the relatively high cost of production, where firms face pressure from energy costs, logistics costs, imported inputs, limited economies of scale, and financing constraints. These factors reduce profitability and make it difficult for local producers to compete with imports or export at internationally competitive prices.
- A second challenge is the limited depth of industrial capabilities, where majority of the firms remain concentrated in basic processing or assembly activities with low technological sophistication. Upgrading requires investment in machinery, standards, certification, managerial capabilities, product design, and workforce skills. Without these capabilities, firms often struggle to move from serving protected domestic markets to competing in regional or global value chains.
- Third,manufacturing is constrained by the weak development of supplier ecosystems. Industrialization is not sustained by large firms alone, it also depends on networks of SMEs providing packaging, components, maintenance, transport, business services, and other intermediate functions. Where these ecosystems are thin, lead firms rely more heavily on imported inputs, reducing domestic value addition and limiting spillovers.
- Fourth, access to long-term and affordable finance remains a bottleneck, particularly for small and medium manufacturers seeking to expand or modernize. Industrial investment often requires patient capital, foreign exchange access for machinery imports, and working capital for inventory and certification processes. Financing systems that are not aligned with industrial upgrading slow the pace of transformation.

5.3 High-potential manufacturing pathways

Rwanda's manufacturing strategy should prioritize subsectors where the country has realistic comparative and competitive potential rather than attempting to industrialize across too many fronts simultaneously. Agro-processing is the most immediate opportunity because it links directly to domestic raw materials, rural incomes, and export diversification. Processed coffee, tea, horticulture products, dairy products, meat and poultry products, edible oils, fortified foods, cereals, and specialty food products all offer potential for moving up the value chain.

Light manufacturing is another promising area, particularly in garments, textiles, leather, furniture, packaging, construction materials, and household consumer goods. These sectors can create jobs at different skill levels and build capabilities gradually. Their export potential depends on productivity, design, standards, branding, and efficient logistics rather than only on scale.

Pharmaceuticals and health-related manufacturing represent a more strategic medium-term opportunity. Rwanda's strong emphasis on health systems, regional logistics, and investment attraction creates potential in selected medical and pharmaceutical segments, especially when combined with targeted partnerships, special zones, and regulatory support. Similarly, green manufacturing linked to solar equipment assembly, e-mobility components, and climate-smart technologies may become increasingly important as the global economy shifts toward low-carbon production.

5.4 What manufacturing needs to become export competitive

The manufacturing sub-sector, to contribute meaningfully to export diversification, Rwanda needs move from general industrial support to targeted competitiveness-building. First, the industrial policy should identify a limited number of priority value chains where the country can build scale, capability, and regional market presence. These value chains should be selected based on raw material availability, market potential, logistics feasibility, skills requirements, and investment interest.

Industrial parks and special economic zones need to function as genuine productivity platforms rather than simply real estate projects. This means ensuring reliable power, water, roads, customs facilitation, digital infrastructure, standards services, and investor aftercare. Clustering firms around shared infrastructure and supplier networks can reduce costs and improve productivity.

Third, manufacturing growth requires strong quality infrastructure. Export firms must meet standards related to food safety, packaging, traceability, labeling, environmental compliance, and technical performance. Strengthening laboratories, certification bodies, standards agencies, and firm-level compliance support is therefore central to diversification.

Fourth, skills development requires to be more tightly linked to industrial upgrading. Technical and vocational training, apprenticeships, industrial engineering support, and firm-based innovation programs are essential. Export competitiveness is not necessarily built on machines alone, but also depends on managers, technicians, supervisors, and workers who can operate, maintain, and improve production systems.

5.5 Policy directions for manufacturing

i. A more effective manufacturing strategy should combine targeted sector support with broader competitiveness reforms. On the sector side, government can prioritize export-oriented value chains such as agro-processing, packaging, pharmaceuticals, textiles and garments, and green technologies. On the broader side, reforms should focus on industrial finance, logistics efficiency, customs facilitation, standards compliance, and investment promotion tied to local value addition.

ii. There is also a need to strengthen the domestic-enterprise base rather than relying only on foreign investment. Foreign direct investment can play an important catalytic role, especially in capital-intensive or technology-intensive sectors, but long-term structural transformation depends on capable domestic firms that can learn, upgrade, and integrate into supply chains. Supporting SME manufacturers through incubators, matching grants, technology extension services, and market linkage programs can help build this base.

iii. Rwanda's manufacturing success will depend on whether firms can move from protected domestic activity into competitive regional and global production. This requires a shift from seeing manufacturing mainly as a source of local supply toward seeing it as a platform for export sophistication, productivity growth, and innovation.

6. SECTOR DEEP-DIVE: AGRICULTURE

6.1 Agriculture's central role in transformation

Agriculture remains fundamental to Rwanda's structural transformation, underpinning livelihoods, food systems, export earnings, and linkages to industry. The agriculture sector employs over 60% of the labor force while contributing approximately 23–24% of GDP[10], reflecting its central but relatively low-productivity role in the economy. Agriculture also remains a key source of export earnings, with traditional commodities such as coffee and tea accounting for a significant share of domestic exports(NAEB,2024). Beyond its direct contribution, agriculture plays a critical role in supporting agro-processing, rural demand, and broader economic activity. As such, agricultural transformation is not separate from industrialization, it is one of its primary foundations.

The positive growth trends in the sector are obervable, with some structural constraints that limit productivity and commercialization. Average landholdings remain small, typically below 0.7 hectares per household, while irrigation coverage remains limited at less than 10% of cultivated land, leaving production highly dependent on rainfall[11]. Soil degradation and climate variability further constrain yields, with periodic droughts and floods affecting output stability. Mechanization levels remain low, with less than 20% of farmers using mechanized inputs or equipment[12], and access to quality inputs such as improved seeds and fertilizers remains uneven. These factors contribute to persistent productivity gaps and limit the ability of farmers to generate consistent marketable surpluses.

For Rwanda's export diversification, agriculture must transition from a focus on primary commodity production toward a more diversified and competitive agri-food system. In addition, fragmented supply chains and limited aggregation reduce efficiency and make it difficult to meet export standards related to quality, consistency, and traceability. These challenges requires strengthening value chains through improved storage, processing capacity, rural infrastructure, and market linkages. Expanding into higher-value agricultural exports presents a major opportunity for Rwanda. While traditional exports remain important, there is growing potential in horticulture, livestock products, specialty foods, and processed agricultural goods, which offer higher value per unit and stronger market demand. Export diversification will depend on increasing productivity, improving quality standards, and strengthening connections between farmers, processors, and exporters. Therefore, agricultural transformation must focus not only on production, but also on value addition, commercialization, and integration into regional and global markets, positioning agriculture as a key driver of inclusive growth and export-led structural transformation.

10 National Institute of Statistics of Rwanda (NISR), GDP National Accounts 2025; Labour Force Survey(2025).

11 Rwanda Agriculture and Animal Resources Development Board (RAB), (2024)

12 World Bank, Rwanda Economic Update (2024)

6.2 Structural constraints in agriculture

- A major structural constraint is low and uneven productivity. Even where policy support has improved input use and extension, productivity gaps remain large across crops, districts, and farm types. Climate variability further compounds these challenges, making rain-fed production riskier and less predictable. For export-oriented value chains, this volatility reduces the reliability of supply and discourages investment in processing.
- A second constraint is limited commercialization and weak aggregation, where smallholder systems often struggle to meet the consistency, traceability, and scale required by modern buyers. Fragmented supply chains increase transaction costs and make it difficult for exporters and processors to source reliably. Cooperatives and aggregation systems exist, but their performance varies significantly.
- Third, post-harvest losses and weak logistics reduce the value captured from agricultural production. Poor storage, inadequate cold-chain systems, weak rural transport, and limited primary processing capacity all reduce marketable surplus and quality. These losses are particularly severe in horticulture, dairy, meat, and perishable products, which are precisely the subsectors with strong diversification potential.
- Fourth, agricultural exports remain concentrated, and domestic value addition is still limited in many value chains. Traditional exports such as coffee and tea remain important, but greater value can be captured through washing, roasting, packaging, branding, specialty certification, and downstream processing. Similarly, non-traditional exports such as fruits, vegetables, flowers, spices, and animal products require stronger investment in standards, cold chains, and market intelligence.

6.3 Opportunities for export-oriented agricultural transformation

Agriculture offers some of the strongest opportunities for diversified export growth if transformation is approached systematically.

a. First, there is significant scope to deepen value addition in traditional export crops. Rwanda has built a strong reputation in premium coffee and quality tea, but further gains can come from branding, specialty market positioning, certification, roasting, packaging, and tourism-linked marketing. These steps shift value capture closer to the producer economy.

b. Horticulture offers major diversification potential. High-value fruits, vegetables, herbs, spices, and floriculture products can generate foreign exchange, create jobs, and support agro-industrial development. However, success depends on irrigation, cold chains, air and land logistics, standards compliance, and coordinated investment across the value chain. These are not input-only challenges; they require full-system coordination.

c. Livestock and animal-source value chains can become more important drivers of value addition and rural commercialization. Dairy, poultry, meat, hides and skins, and animal feed systems offer strong potential when linked to processing, quality control, veterinary systems, and market access. Such value chains can also create demand for feed, cold storage, transport, packaging, and veterinary services.

d. Agro-processing provides the bridge from agricultural production to manufacturing-based export diversification. A stronger agricultural base creates reliable inputs for mills, dairies, beverage producers, food processors, edible oil producers, leather processors, and feed manufacturers. This is where agriculture's transformation effect becomes most powerful: it supports industrialization while also raising farmer incomes.

6.4 What agricultural transformation requires

Agricultural transformation requires moving beyond production targets toward value-chain competitiveness. Raising yields remains important, but it is not enough. The key question is whether production systems are aligned with market demand, processing requirements, and export opportunities. This requires better coordination among producers, aggregators, processors, logistics providers, financial institutions, and government agencies.

Irrigation and climate resilience are especially important. Export diversification cannot depend heavily only on climate-sensitive rain-fed production. Expanding irrigation, climate-smart agriculture, soil restoration, water harvesting, and resilient seed systems can stabilize supply and improve export readiness. This is particularly important for horticulture and feed systems linked to livestock growth.

Agriculture also requires stronger market institutions. Farmers and agri-enterprises need access to market intelligence, contract farming frameworks, input finance, insurance, extension, and quality assurance services. Cooperatives and producer organizations need to be strengthened not only as social structures but as commercial organizations capable of meeting buyer requirements. In addcition, traceability systems, digital market platforms, and structured trading mechanisms can also improve efficiency and transparency.

6.5 Policy directions for agriculture

- Agricultural policy for export diversification should focus on commercialization, resilience, and value addition. Public investment should increasingly target irrigation, feeder roads, storage, cold chains, aggregation centers, veterinary systems, and extension for high-value crops and livestock. Input support should be more closely tied to marketable production and value-chain development.
- There should also be stronger alignment between agriculture policy and industrial policy. Agro-processing zones, rural collection systems, cold-chain investment, and export logistics should be planned together rather than separately. In addition, financing instruments for agriculture need to support not only seasonal production but also investment in storage, equipment, greenhouses, irrigation, and processing.
- A more export-oriented agriculture sector will also require stronger branding and market development. Rwanda can position itself in premium, specialty, traceable, and sustainably produced niches rather than competing mainly on bulk volume. This is particularly relevant given land constraints and the need to maximize value per hectare rather than only output volume.

7. CROSS-SECTOR LINKAGES: WHY INTEGRATION MATTERS

The central lesson from this deep-dive is that export diversification may not be achieved through isolated sector reforms. Energy, manufacturing, and agriculture form an interconnected system. Agriculture generates raw materials and market opportunities for manufacturing. Manufacturing creates value addition, packaging, processing, and tradable products. Energy underpins both by determining cost, scale, and reliability. Weakness in one sector limits performance in the others.

Improving agricultural production without expanding processing capacity can lead to surplus, price volatility, and low farmgate value. Expanding manufacturing without affordable and reliable energy raises production costs and undermines competitiveness. Increasing energy access without targeting productive uses may improve welfare but yield limited structural change. Export

transformation therefore depends on integrated planning, where infrastructure, sector policy, finance, and trade facilitation are aligned around priority value chains.

There is also a strong role for logistics, digitalization, finance, and standards systems across all three sectors. Export diversification requires efficient border processes, warehouse systems, transport connectivity, e-commerce readiness, data systems, and quality infrastructure. These cross-cutting enablers must be treated as part of the productive transformation agenda, not as secondary support functions.

8. STRATEGIC PRIORITIES FOR RWANDA'S EXPORT DIVERSIFICATION AGENDA

A credible export diversification strategy should begin with a limited set of high-potential value chains rather than a broad and fragmented wish list. Rwanda should identify priority sectors where it can combine domestic resource endowments, market opportunities, institutional capabilities, and investor interest. These may include premium agro-exports, processed foods, dairy and livestock products, textiles and garments, pharmaceuticals, packaging, construction materials, and green technology-linked manufacturing.

Second, the country should adopt a value-chain approach that links production, processing, infrastructure, finance, standards, and markets. The most successful export sectors are built through coordinated ecosystems, not stand-alone interventions. This requires stronger public-private coordination and clearer implementation mechanisms.

Third, Rwanda should invest in productive infrastructure that directly supports transformation. Energy reliability for industrial users, irrigation for high-value agriculture, cold chains for perishables, and logistics platforms for exporters are all examples of infrastructure that has direct export impact. These investments often generate stronger structural returns than general infrastructure alone.

Fourth, export diversification should be anchored in firm upgrading. Firms are the agents of transformation. They need support to adopt technology, improve management, meet standards, access finance, and enter new markets. A diversification strategy that focuses only on macro policy and investment attraction without building enterprise capability will have limited impact.

Fifth, Rwanda should leverage regional integration more strategically. Regional markets often provide the first platform for export learning, scale-building, and product testing before firms move into more demanding global markets. The AfCFTA and East African market space create opportunities for processed food, manufactured goods, health products, and green products, provided firms can compete on quality and cost.

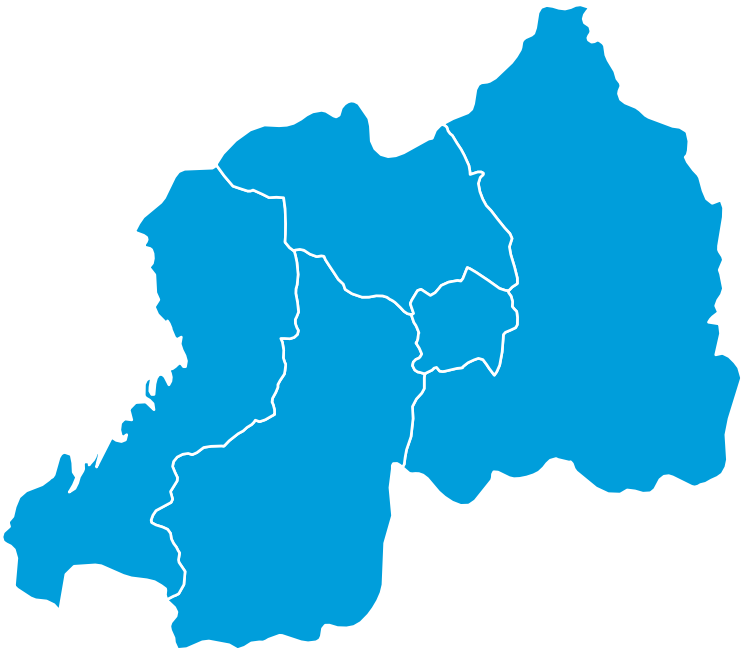
9. CONCLUSION

Rwanda's long-term economic transformation will depend on its ability to diversify exports and deepen domestic productive capabilities. This is not merely a trade objective, but a strategic pathway to enhance resilience, raise productivity, create quality jobs, and strengthen external sustainability. Current structural imbalances, evidenced by a trade gap where imports exceed domestic exports by more than 4:1, highlight the urgency of transitioning toward a more value-driven, export-oriented growth model. Sustaining strong growth of 9.8% attained in 2025 will increasingly depend on expanding competitive, tradable sectors.

Each of the core sectors requires a structural shift. The energy sector needs to move beyond access, now reaching about 78% of households, toward affordability, reliability, and productive use to support industry and agro-processing. Manufacturing, currently contributing about 9% of GDP, must evolve into a dynamic, export-capable sector that drives value addition and technological upgrading. Agriculture, employing over 60% of the workforce, must transition from low-productivity, fragmented systems toward commercially viable, climate-resilient, and market-linked production that feeds into processing and export value chains.

The key to success lies in stronger integration across these sectors. Coordinated, value-chain-driven policies are required to align energy investments with industrial development, link agriculture to processing, and connect producers to domestic and regional markets. This includes prioritizing productive infrastructure such as industrial parks, cold chains, irrigation, and logistics systems, alongside strengthening firm capabilities, access to finance, and standards compliance. Regional markets within the EAC and AfCFTA offer important opportunities for Rwanda to scale exports in niche, high-value segments.

Looking ahead, Rwanda has a clear opportunity to build a new generation of export sectors anchored in value addition, green competitiveness, and regional integration. With strong institutional foundations and a clear strategic direction under NST2 and Vision 2050, the country is well positioned to shift from a narrow export base toward a more diversified, competitive, and transformation-driven growth model.



Under **NST2** and **Vision 2050,** the country is well positioned to shift from a narrow export base toward a more diversified, competitive, and transformation-driven growth model.

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