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# Tanzania's Green Gold: Export Potential, Competitiveness and Strategic Pathways for Avocado Products.

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## Abstract

Tanzania's avocado sector has emerged as a promising contributor to agricultural exports. Despite its rapid growth, with export values increasing annually, the sector remains underutilized within the global avocado market. This study integrates the global value chain and comparative advantage theories to explore the export potential of Tanzanian avocado products by analyzing the current market trends, identifying opportunities, addressing challenges, and proposing strategies to enhance product-level competitiveness in international markets. A mixed-method approach was employed, integrating International Trade Center (ITC) tools such as the export potential map, trade map, and market access map to identify high-potential export markets, quantify untapped opportunities, and evaluate trade barriers. The analysis combines desktop research, quantitative methods, and stakeholder consultations to provide a comprehensive assessment of the export landscape. The findings reveal substantial untapped export potential for Tanzanian avocados in key international markets. The study offers strategic recommendations to overcome existing barriers, including investments in cold chain infrastructure, adherence to international quality standards, and development of value-added products. Leveraging ITC tools and implementing targeted interventions, Tanzania can diversify its export portfolio, improve rural livelihoods, and strengthen its position as a competitive player in the global avocado market. This study provides actionable insights for policymakers, industry stakeholders, and development partners aiming to maximize the sector's economic and developmental impact.

**Keywords:** Green gold, export potential, competitiveness, avocado, Tanzania

## Background

Avocado production in Tanzania has expanded significantly over the past decade, establishing itself as a promising sector within the country's agricultural exports. Tanzania began exporting avocados in 2007, and by 2016, export values had reached an estimated USD 2.1 million. The major production regions include Njombe, Iringa, Mbeya, and Kilimanjaro, with the 'Hass' variety being the most widely cultivated. Smallholder farmers, often managing plots of less than 2 hectares, contribute to the majority of production (Hoddle & Mound, 2020). By 2023, Tanzania's avocado export values had risen to approximately USD 37 million, in contrast to a global market value of USD 7.278 billion (ITC, 2024). The crop is primarily cultivated in the favorable climates of the Southern Highlands, Kilimanjaro, and Njombe regions, with both acreage and yield experiencing substantial growth. This expansion is driven by rising global demand, as health-conscious consumers increasingly value avocados for their versatility in culinary, cosmetic, and health applications (Muñoz et al., 2023; Huang, 2023). Tanzania, blessed with fertile soils and favorable climatic conditions, is well-positioned to become a significant player in this market. Key international markets, including the European Union (notably France and the Netherlands), China, and the Middle East, are importing Tanzanian avocados in increasing quantities, with demand extending to both fresh avocados and derived products such as avocado oil. However, competition is intensifying as other major producers expand their market share. Freshplaza (2020) identified Peru and Kenya as fast-growing suppliers of avocados in the EU market, which remains South Africa's top export destination. Additionally, Kenya has emerged as one of the world's fastest-growing avocado exporters (Workman, 2021). Freshplaza (2020) further noted that Peru's strategy focuses on expanding production to strengthen its presence in North America and Europe. Moreover, Kenya and South Africa produce and supply avocados to international markets during similar seasons

(Zwane & Ferrer, 2024). To maintain product-level competitiveness, Tanzania must adopt a strategic approach by identifying optimal export seasons. Leveraging its favorable climate, Tanzania can align its harvest cycles to avoid direct competition with dominant suppliers while meeting global market demand effectively.

The avocado export industry in Tanzania holds substantial potential to contribute to the national economy (Kingu & Kinyondo, 2024). Vijayasree et al. (2024) describe avocado as 'green gold' due to its considerable economic impact and the rising global demand. As a rapidly expanding crop, avocado plays a vital role in both local and national economies particularly through export revenues, a description that is contextually relevant to Tanzania. With increasing production and export capacity, avocados could become a major source of foreign exchange, help improve the trade balance, and reduce reliance on traditional exports such as coffee and tea. Additionally, the growing global preference for organic and sustainably grown produce, especially in Europe and Asia, gives Tanzanian avocados a competitive edge in high-value niche markets. Value-added products like avocado oil and processed foods further enhance revenue potential by allowing the country to capture more value within the supply chain (Boniphace et al., 2023). Moreover, avocado production is labor-intensive, offering significant job creation opportunities, particularly in rural areas with limited employment options. As demand grows, employment expands across farming, processing, packaging, and logistics, resulting in higher incomes and improved living standards for rural communities. This economic activity also supports broader rural development by enhancing access to education, healthcare, and social services. Furthermore, avocado farming encourages sustainable agricultural practices and stimulates investment in infrastructure such as irrigation and cold storage, benefits that extend to other crops as well (Hakizimana & May, 2018; Kamothe et al., 2023).

Despite its significant promise, including substantial yields and lucrative export opportunities, the Tanzanian avocado sector faces several challenges, such as inadequate infrastructure, insufficient cold chain facilities, and a need for greater adherence to international quality standards (Juma et al., 2019; Malekela, 2022). To unlock its full potential as a global player, it is essential to address these issues and strengthen the value chain (Steffens et al., 2020). With targeted interventions, Tanzania can improve its position in the global avocado market. Prioritizing this high-potential crop, the country can diversify its agricultural sector, reduce poverty, and foster inclusive growth, positioning avocados as a strategic asset for national development (Juma et al., 2019). This study, therefore, seeks to answer the following question: What are the export opportunities, challenges, and strategic paths for enhancing Tanzania's avocado industry in the global market?

This study contributes to the existing literature on agricultural trade by examining Tanzania's avocado sector as an emerging player in global markets, emphasizing its role in export diversification beyond traditional commodities like coffee and tea. By analyzing Tanzania's position relative to other major exporters such as Kenya, Peru, Mexico, and South Africa, it provides valuable insights into global trade competition, production cycles, and strategic market positioning. Additionally, the study highlights the significance of value-added processing, such as avocado oil production, in enhancing export revenues and improving trade competitiveness through supply chain optimization and infrastructure investment. Beyond its trade literature and academic contributions, the study also informs policy by identifying key strategies to enhance Tanzania's avocado export competitiveness. It emphasizes the importance of aligning harvesting and export seasons to minimize direct competition with dominant suppliers like Kenya and South Africa, allowing for better market positioning. It underscores the urgent need for infrastructure development, particularly in cold chain logistics, transportation networks, and quality control systems to ensure that Tanzanian avocados meet international market standards efficiently. Recognizing the crucial role of smallholder farmers in avocado production, the study advocates for inclusive policies that improve access to finance, extension services, and training on quality compliance, enabling their effective participation in the global value chain. Also, it stresses the need for sustainability and certification policies, promoting organic and eco-friendly farming practices, certification programs, and adherence to international quality standards to enhance Tanzania's market access in high-value global segments. Ultimately, the findings will position Tanzanian avocados as a competitive and sustainable export, fostering economic growth, job creation, and rural development, while securing a stronger presence for Tanzania in international trade. The remainder of the paper is organized as follows: a review of relevant literature, the research methodology, a presentation of findings with a corresponding discussion, and a conclusion accompanied by practical recommendation

## Theoretical Foundations

The Global Value Chain (GVC) theory, developed by Gary Gereffi in the 1990s, and applied by many scholars such as Kano et al. (2020), provides a framework for understanding how global industries are organized and how value is distributed across different actors. Central to this theory are concepts such as governance, upgrading, and barriers to entry, particularly relevant for emerging economies like Tanzania. The theory emphasizes how participation in GVCs can influence economic development by facilitating product-level competitiveness, the ability of specific goods to perform well in international markets based on quality, value addition, and conformity to standards. In the context of Tanzania's avocado sector, product-level competitiveness is shaped by the country's capacity to improve the quality, processing, and presentation of avocado products. GVC theory highlights the importance of upgrading, both through product upgrading, moving from raw avocados to high-value products such as avocado oil and process upgrading, such as adopting improved storage, cold chain, and packaging technologies. These enhancements directly increase the marketability and price competitiveness of Tanzanian avocado products in global markets.

Governance within GVCs, often led by international buyers, determines market access and compliance standards. This creates both opportunities and challenges for Tanzanian producers, especially smallholder farmers, who often face difficulties in meeting international quality and certification requirements (Steffens et al., 2020). These governance structures significantly influence the product-level competitiveness of Tanzanian avocado exports, as they shape the incentives, constraints, and resource flows within the value chain. Moreover, regional and global integration plays a vital role. Participation in trade frameworks such as the East African Community (EAC) and the African Continental Free Trade Area (AfCFTA) can enhance market access, reduce trade barriers, and enable Tanzania to position itself within regional value chains as a stepping stone to broader global markets (UNECA, 2022). Leveraging these platforms can help Tanzania strengthen the export performance of avocado products by enhancing competitiveness at the product level.

Despite its strengths, the GVC framework has certain limitations in fully capturing the dynamics of Tanzania's avocado sector. First, it places significant focus on the relationships between global buyers and suppliers, often overlooking the local realities of smallholder farmers and informal actors who play a central role in production (Ribeiro et al., 2024). These actors face structural barriers including limited access to finance, skills, and infrastructure that constrain their ability to upgrade and contribute to competitive product offerings. Second, the assumption that upgrading automatically leads to improved competitiveness may be overly optimistic in Tanzania's case. While upgrading enhances product quality, broader infrastructural gaps such as inadequate cold storage, poor rural roads, and weak extension services continue to hinder the realization of full export potential. Even where product quality improves, these systemic challenges can undermine the competitiveness of avocado products in foreign markets. Third, the GVC theory tends to understate the impact of external shocks, such as global price fluctuations, trade policy shifts, or political instability. These factors can significantly affect Tanzania's ability to maintain a stable and competitive position in avocado exports.

To address these limitations, the theory of comparative advantage, as discussed by Smit (2010), offers a complementary perspective. Rooted in classical trade theory by David Ricardo, it suggests that countries should specialize in goods they can produce efficiently at lower opportunity costs. Tanzania's favorable agro-climatic conditions give it a natural comparative advantage in avocado production. By initially focusing on enhancing the competitiveness of raw avocados, the country can build a strong foundation before transitioning to more complex value-added products. This gradual approach balances the GVC focus on upgrading with a realistic path based on existing strengths. Additionally, the comparative advantage perspective supports inclusive integration of smallholders by promoting policies that strengthen farm-level productivity and reduce transaction costs, thereby improving the competitiveness of their products. It also accommodates external risks more explicitly, encouraging diversification and risk mitigation strategies in export development (Mgale et al., 2024). In sum, combining GVC theory with comparative advantage thinking offers a more grounded and actionable framework for enhancing the product-level competitiveness of Tanzania's avocado exports. This integrated approach recognizes the potential of upgrading, the importance of structural reforms, and the strategic value of leveraging Tanzania's natural strengths in avocado production to succeed in international markets.

## Revisiting Tanzania's Green Gold: The Avocado Industry

The Tanzanian avocado sector faces significant challenges that hinder its competitiveness and growth (Malekela, 2022). Poor infrastructure, including inadequate road networks and a lack of cold storage facilities, leads to high post-harvest losses, which reduce both the quantity and quality of avocados available for export (Komanya et al., 2025). These losses are further exacerbated by difficulties in accessing international markets, where stringent phytosanitary and packaging standards often exceed the capacity of small-scale farmers to meet compliance requirements, thereby limiting their market reach (World Bank, 2022). This observation is supported by Juma et al. (2019), who examined avocado production and local trade in the Southern Highlands of Tanzania. Additionally, the sector is characterized by limited value addition, as most avocados are exported raw with minimal processing into high-value products such as oil or guacamole (Malekela, 2022; Boniphace et al., 2023). This lack of diversification not only reduces potential earnings but also hampers the sector's ability to access premium markets (Purkayastha et al., 2012). Furthermore, access to finance remains a significant constraint, as many farmers and cooperatives struggle to secure affordable credit needed for investments in high-quality inputs, such as seeds, fertilizers, and advanced farming technologies (UNCTAD, 2021). Addressing these interconnected challenges is essential to unlocking the full potential of Tanzania's avocado sector and enhancing its contribution to the national economy.

The global market presents significant opportunities for Tanzania's avocado sector (Hoddle & Mound, 2020). This perspective is reinforced by the International Trade Centre (ITC, 2024), which highlights the growing popularity of avocado oil and other processed avocado products, particularly in Europe, the Middle East, and Asia, as creating new avenues for export growth. These markets not only demand higher volumes but also value-added products, offering Tanzanian producers the chance to diversify their offerings and tap into premium price segments (Reuben & Meliyo, 2022). Amare et al. (2019) also emphasize this point in their study on the impact of smallholder farmers' participation in avocado export markets on labor dynamics, farm yields, sales prices, and incomes in Kenya. They concluded that policymakers should focus not only on resource accumulation for farmers but also on ensuring the inclusiveness of export market participation for smallholder farmers. Regionally, Tanzania's membership in trade blocs such as the EAC and the AfCFTA enhances its market access potential. These agreements facilitate reduced trade barriers, improve market connectivity, and expand opportunities for regional avocado trade (UNECA, 2022). This integration allows Tanzanian producers to establish a stronger presence within neighboring markets while leveraging collective trade benefits (Amare et al., 2019). Sustainability initiatives also provide a competitive edge for Tanzanian avocados in global markets. By adopting organic and sustainable farming practices, producers can position their products as premium offerings tailored to niche markets that prioritize environmentally friendly and ethically produced goods (Huang, 2023). Tzatzani et al. (2022) support these findings in their study on the effects of organic fertilizers on avocado trees in Greece and Italy, demonstrating the value of sustainable farming practices. These trends align with global producer and consumer preferences, enhancing the long-term competitiveness of Tanzania's avocado exports.

The literature identifies several challenges within Tanzania's agricultural value chain that hinder the competitiveness and growth of the avocado sector, all of which are interlinked and critical to addressing for unlocking its potential. A primary challenge is the poor infrastructure, including inadequate road networks and insufficient cold storage facilities, which results in significant post-harvest losses. These losses directly affect both the quantity and quality of avocados available for export, reducing market supply and compromising the quality standards necessary for international trade (Komanya et al., 2025). Additionally, the sector faces challenges in meeting international market requirements, particularly stringent phytosanitary and packaging standards, which smallholder farmers often struggle to comply with due to limited resources and knowledge (World Bank, 2022). This restricts their access to broader markets and hampers export opportunities. Further compounding these challenges is the limited value addition in the avocado sector. Most Tanzanian avocados are exported in their raw form, with little processing into higher-value products such as avocado oil or guacamole (Malekela, 2022). This lack of diversification not only diminishes potential revenue but also limits the ability to access premium market segments, which increasingly demand value-added, processed products (Purkayastha et al., 2012). Coupled with this is the issue of access to finance. Many farmers, particularly smallholders, face difficulties securing affordable credit to invest in high-quality inputs such as fertilizers, seeds, and modern farming technologies, all of

which are necessary to enhance productivity and meet international standards (UNCTAD, 2021).

However, despite these challenges, the literature also identifies significant opportunities in the global market for Tanzania's avocado sector. There is increasing demand for avocado oil and other processed products, particularly in Europe, the Middle East, and Asia, where these goods are seen as high-value items (ITC, 2024). This provides an opportunity for Tanzanian farmers to diversify and move up the value chain, catering to premium price segments by producing more value-added products (Reuben & Meliyo, 2022). Additionally, Tanzania's membership in trade agreements such as the EAC and the AfCFTA enhances market access, reducing trade barriers and improving connectivity to neighboring markets, further facilitating avocado trade in the region (UNECA, 2022). Sustainability initiatives also present an avenue for Tanzanian producers to gain a competitive edge. Adopting organic and eco-friendly farming practices, Tanzanian avocados could tap into premium niche markets that prioritize sustainability (Huang, 2023). Thus, while the avocado sector faces several challenges, addressing these issues and leveraging the identified opportunities can significantly enhance Tanzania's position in the global market.

### Methodology

This study employs a mixed-method approach that integrates desktop research, ITC tools, and quantitative and qualitative strategies to comprehensively evaluate the export potential of avocado products in Tanzania. The research adopts a descriptive and analytical design, utilizing both secondary and primary data sources. The primary focus is on evaluating export potential, assessing market dynamics, and identifying challenges and prospects for avocado exports in Tanzania. At the core of this evaluation is the concept of competitiveness, which is influenced by a range of factors, including productivity, cost structures, logistical efficiency, compliance with international standards, and the ability to respond to evolving consumer preferences. In this study, competitiveness is assessed not only through market performance indicators, such as export growth, market share, and diversification but also through structural and institutional enablers such as infrastructure, policy support, and the functionality of the avocado value chain.

Desktop research facilitated the literature review by analyzing academic articles, reports, and policy documents related to the avocado industry in Tanzania, global avocado trade trends, and export policies. Industry reports from the Tanzania Horticultural Association (TAHA), the Ministry of Agriculture, and international organizations, including FAO and ITC, were also reviewed. ITC market analysis tools were central to the study. The Export Potential Map was used to identify high-potential export markets for Tanzanian avocados and to quantify untapped export opportunities in existing and emerging markets. The Trade Map analyzed trade flows, market shares, and the performance of avocado exports, while the Market Access Map evaluated tariff and non-tariff barriers affecting avocado exports. Using the purposive sampling, the qualitative data were collected from key stakeholders, including farmers, exporters, and policymakers.

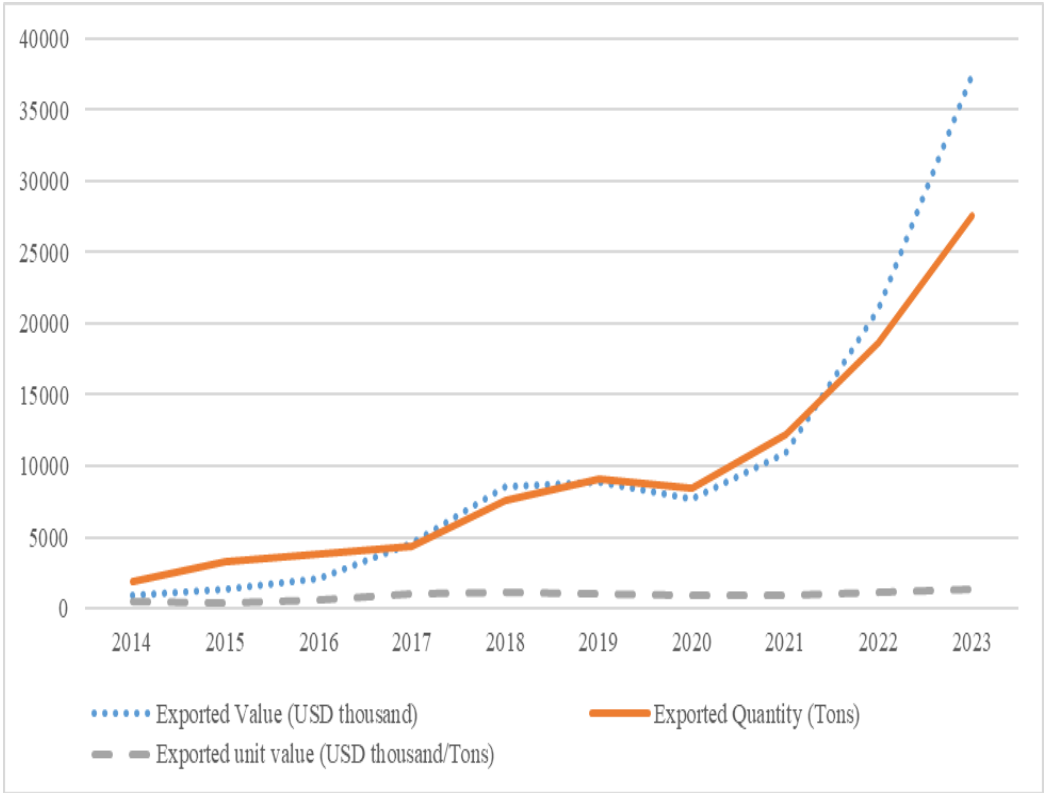
The comparison between actual and potential exports was conducted using the ITC's Export Potential Map, identifying promising target markets and untapped opportunities. The triangulation method was used to ensure consistency and reliability by combining findings from ITC tools, statistical analyses, and qualitative insights. Validation techniques included consultations with stakeholders to refine results and recommendations. While ITC tools are valuable for identifying export trends, market opportunities, and tariff structures, they have limitations. These tools do not fully capture key factors such as value chain constraints, informal trade flows, hidden trade costs, and competitor strategies, all of which are crucial determinants of competitiveness in the avocado sector. To address these gaps, the study integrated the stakeholder consultations, ensuring a more comprehensive and actionable analysis. Combining ITC tools, quantitative analysis, and stakeholder insights, this structured methodology offers robust, data-driven recommendations for enhancing both the export potential and international competitiveness of Tanzania's avocado industry.

### Results and Discussion

#### Growth Trends, Export Value and Volume

Recent statistics on the export value and volume of fresh and dried avocado products highlight Tanzania's expanding footprint in the international avocado market (ITC, 2024). In recent years, exports have shown substantial growth, with the value of fresh and dried avocado exports reaching new heights due to rising demand from key markets in Europe, the Middle

East, and Asia. Table 1, which presents three selected indicators over the past decade, underscores the potential of Tanzanian avocado products. For instance, the increase in avocado export unit values from 0.479 million in 2014 to 1.36 million in 2023 reflects a promising trend for Tanzania’s agricultural sector. This growth not only indicates rising global demand for Tanzanian avocados but also highlights improved quality, competitiveness, and stronger market positioning for the country's avocado products. The significant increase in unit value signals Tanzania’s potential to capture higher returns in the global market, benefiting smallholder farmers, attracting additional investment, and supporting the nation’s economic development and export diversification efforts. Similar findings were reported by Amare et al. (2019) in their study on avocado export markets, focusing on the labor market, farm yields, sales prices, and incomes in Kenya. Tanzanian avocados are known for their quality, which has fueled growth in both fresh and dried exports, including value-added products like avocado oil and purées. The data reveals a sharp rise in both export value and quantity, highlighting Tanzania’s competitive advantage. This is further supported by favorable growing conditions and strategic trade relationships, findings also noted by Boniphace et al. (2023) in their study on the profitability of avocado production for export trade among smallholder farmers in Rungwe and Hai districts, Tanzania. This success is reinforced by investments in post-harvest technology, cold storage facilities, and enhanced logistics, enabling Tanzanian producers to maintain the freshness and quality required by international standards. These combined factors emphasize Tanzania's presence as a reliable supplier of premium avocado products and reinforce its potential for sustained growth in global exports.



Graph 1: Growth Trends, Export Value and Volume

Sources: ITC Statistics, 2024.

Tanzania’s Key Avocado Export Markets

Tanzania has experienced significant growth in avocado exports in recent years, driven by demand in both global and regional markets (Kingu & Kinyondo, 2024). Among Tanzania's main importers are countries in the EU (notably the Netherlands, France, and Spain), South Africa, Japan, the United Arab Emirates, and emerging markets within Africa (ITC, 2024). Each of these markets presents unique opportunities and challenges, making them critical targets for Tanzania's avocado export strategy. Similar findings were noted by Hoddle & Mound (2020) during their surveys of thrips (Thysanoptera) associated with avocados in Mbeya, Tanzania. The EU, and particularly countries like the Netherlands, Spain, and France, represents a major destination for Tanzanian avocados. The Netherlands serves as a central hub for avocado distribution across Europe due to its well-developed import infrastructure and

favorable trading policies within the EU. Spain, one of Europe's largest consumers of avocados, offers direct access to the Mediterranean market, while France continues to show rising demand for avocados due to shifting consumer preferences toward healthier diets. Regionally, South Africa stands out as the largest and most accessible market for Tanzanian avocado exports. South Africa not only ranks as the second-largest market for Tanzanian avocados among the top ten global importers but also benefits from favorable trade agreements and geographical proximity (Elmardi, 2024). This close relationship provides Tanzanian exporters with a strategic advantage in terms of logistics and reduced trade barriers. In addition to South Africa, other African countries present an untapped opportunity for Tanzania's avocado exports (Juma et al., 2019). EAC and SADC members show potential for growth, especially with improving intra-regional trade infrastructure. The AfCFTA could further ease trade barriers, enabling Tanzanian avocados to reach markets like Kenya, Rwanda, and Zambia more efficiently. Figure 1 illustrates Tanzania's top ten avocado export destinations, highlighting South Africa as the second-largest and most accessible market due to strong trade linkages.



Sources: Trade Map & Market Access Map, 2024.

Figure 1. Tanzania's Top Ten Avocado Export Destinations

### Challenges Facing Avocado Exports in Tanzania

Tanzania's avocado industry has demonstrated strong growth potential, yet it faces several challenges that limit its ability to fully capitalize on both global and regional market opportunities. Key challenges include maintaining quality standards and obtaining certifications, essential for meeting the stringent requirements of international markets. Additionally, transportation and logistics, especially the lack of adequate cold chain infrastructure, present difficulties in preserving avocado quality from farm to export destinations. Comparable challenges were identified by Pérez and Gómez (2022), reinforcing the need for targeted interventions. Another significant constraint is the limited capacity to process avocados into value-added products such as oil and cosmetics. This restriction forces a focus on fresh fruit exports, which yield lower added value compared to processed products. Moreover, limited access to reliable market information affects the ability of farmers and traders to respond effectively to demand requirements and set competitive pricing strategies. Access to finance is also a pressing issue; smallholder farmers and entrepreneurs in the avocado value chain face difficulties obtaining the funds needed to scale production and invest in quality improvements. Additionally, Tanzania encounters intense competition from established avocado-exporting countries such as Mexico, Peru, and Kenya, which benefit from more developed export systems and stronger market presence. This competitive landscape,

shaped by various market conditions as illustrated in Table 1, poses a significant challenge to Tanzania's market share. Addressing these challenges is crucial to unlocking greater opportunities for Tanzanian avocados in the global market.

Table 1 provides a detailed overview of the supplying markets for fresh or dried avocados imported by the Netherlands in 2023. As a major player in the global avocado market, the Netherlands accounts for 13.7% of world imports, placing it as the second-largest importer globally after the United States. This notable share underscores the Netherlands' importance in the avocado trade. Additionally, as indicated by the Herfindahl Index (HI), the market concentration index of 0.25 suggests that the Netherlands' market for Tanzania's exports is highly concentrated. In contrast, countries such as Kenya and Chile have a moderately concentrated market index of 0.14, indicating less intense competition. Despite Tanzania benefiting from a tariff advantage of 5.10, it still faces a higher number of non-tariff barriers (NTBs), totaling 39, as shown in Table 1. Given the high demand and strategic importance of the Netherlands as an entry point to Europe, the avocado market here presents a substantial opportunity for exporters worldwide. However, this opportunity is accompanied by fierce competition among various supplying countries, as illustrated in Table 1. Exporters must navigate and adapt to these competitive dynamics to maintain or grow their market share in this lucrative but challenging market.

Table 1: Condition of Accessing Netherlands' Avocado Market						
Exporters	World Ranking exports	Market Concentration <sup>1</sup>	Customs Tariffs (Import duty)		Applied tariffs	Regulatory requirements
			MFN <sup>2</sup>	Pref <sup>3</sup>		
Peru	3	0.18	5.10	0	5.10	39
Colombia	7	0.27	5.10	0	5.10	39
South Africa	9	0.54	5.10	0	5.10	39
Kenya	10	0.14	5.10	0 – 1.6	5.10	41
Chile	6	0.14	5.10	0	5.10	39
Spain	4	0.25	---	0	0	39
Israel	5	0.22	5.10	0	5.10	39
Morocco	8	0.28	5.10	0	5.10	41
Tanzania	18	0.25	5.10	0	5.10	39
Belgium	16	0.23	0	0	0	39
Morocco	8	0.28	5.10	0	5.10	41
Tanzania	18	0.25	5.10	0	5.10	39
Belgium	16	0.23	0	0	0	39

Sources: ITC Statistics, 2024.

<sup>1</sup>The concentration is based on the Herfindahl index (HI), is calculated by squaring the share of each country in the selected market and by summing the resulting numbers, thus:

$$H = \sum_{i=1}^N s_i^2$$

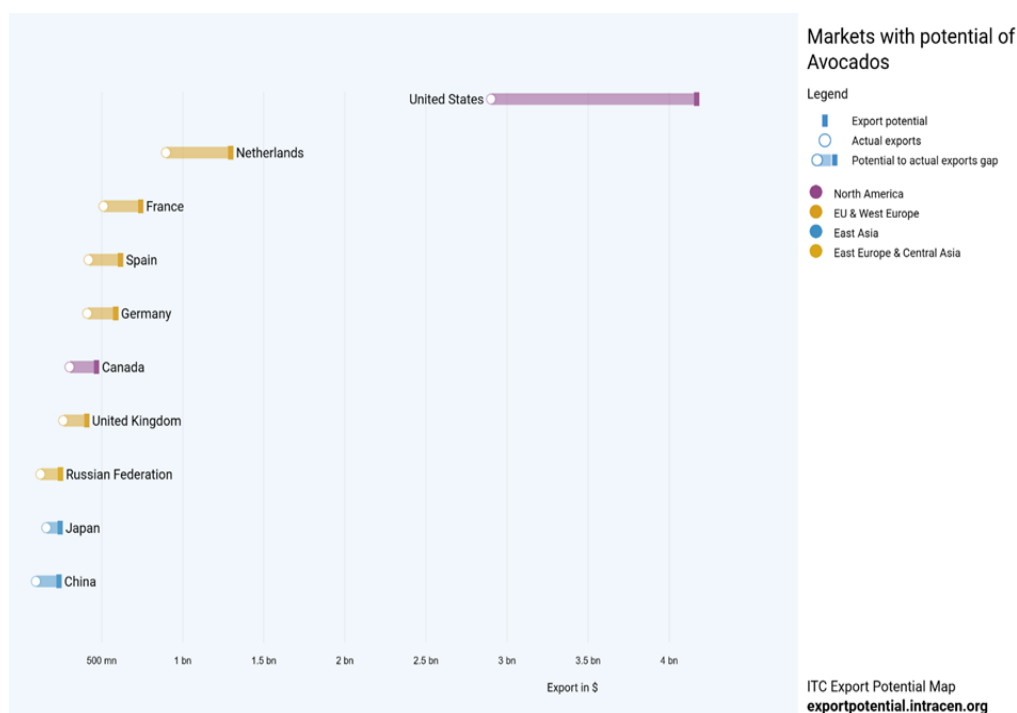
where  $s_i$  is the share of the country  $i$  in the market, and  $N$  is the number of countries. The HI ranges from  $1 / N$  to one. They consider HI between 0.1000 and 0.1800 to be moderately concentrated and indices above 0.1800 to be concentrated.

<sup>2</sup>Most favoured nation tariffs (MFN) are the tariffs applied by WTO members to goods imported from any other WTO member countries in respect of the MFN principle.

<sup>3</sup>Preferential tariffs are lower than MFN tariffs and are applied to imports from countries receiving favorable treatment through a trade agreement or unilateral tariff preferences. Note that these preferential rates may not cover all traded products.

## Opportunities and Prospects for Expanding Avocado Exports

**The rising global demand for avocados:** This offers considerable growth opportunities for exporters, particularly in high-potential markets like the EU, Asia, and the Middle East. This surge is driven by consumers' growing awareness of the health benefits of avocados and their versatility in various cuisines and products, ranging from fresh produce to processed goods. These trends present promising prospects for avocado producers worldwide to expand their market reach. Among the top markets for avocado exports, as illustrated in Figure 2, the United States, the Netherlands, and France stand out due to their substantial demand. Notably, the US shows the largest gap between potential and actual export values, underscoring a unique opportunity to bridge this difference and increase exports by up to \$1.3 billion. Closing this export gap could be highly beneficial for avocado exporters aiming to capture a larger share of the U.S. market and meet rising consumer demand.



Sources: Trade Map & Market Access Map, 2024.

Figure 2. Markets with the Greatest Potential for Tanzania's Avocado Exports

Tanzania has a significant export potential for avocado products, estimated at \$43 million. Currently, the actual export value stands at approximately \$34 million, indicating a promising but underutilized market. This leaves an unrealized potential of \$19 million across various target countries, suggesting room for growth and expansion in Tanzania's avocado export sector (ITC, 2024). Strategically enhancing production, improving quality standards, and strengthening trade relationships, Tanzania can work towards capturing this unrealized potential. Expanding into new markets and increasing efficiency in existing ones could significantly boost Tanzania's position as a competitive avocado exporter on the global stage.

**Regional market opportunities:** The growing demand for avocados in neighboring African countries presents promising opportunities for Tanzania's export market. Trade agreements within regional frameworks like the EAC and AfCFTA offer additional pathways to access these markets. Leveraging the benefits of reduced tariffs, simplified trade regulations, and improved market access under these agreements, Tanzania can strengthen its trade position and expand its avocado exports within Africa. A similar observation was made by Ogbologu (2024) in his analysis of the economic dynamics of the AfCFTA. Expanding into these regional markets could provide a more stable demand base, reduce dependency on distant markets, and support economic integration efforts within the continent. With strategic planning and investment, Tanzania could tap into these nearby opportunities to enhance its avocado export growth in the coming years.

**Value-added processing opportunities:** Tanzania has significant potential to increase revenue from its avocado industry through value-added processing. Producing items such as avocado oil, guacamole, cosmetics, and health products can greatly enhance profit margins compared to exporting raw avocados. These processed goods not only command higher prices but also have a longer shelf life, helping to address issues related to the perishability of fresh avocados. Similar results were reported by Lieu et al. (2024). Investing in processing facilities and adopting efficient production techniques, Tanzania can diversify its product offerings and appeal to a broader market segment, including both domestic and international consumers. Moreover, value-added processing aligns well with consumer trends toward health and wellness, as avocado-based products are increasingly valued for their nutritional and skincare benefits. Expanding into this area could create new employment opportunities, strengthen local industries, and improve Tanzania's overall economic resilience in the global avocado market.

**Enhanced quality standards compliance:** Strengthening Tanzania's position in the global avocado market requires a strong emphasis on meeting international quality standards. Providing targeted training and resources to farmers and exporters in areas like certification processes, pest management, and quality control can significantly boost export competitiveness, as also highlighted by Pérez and Gómez (2022). Through these programs, farmers gain knowledge of best practices in pest management, safe handling, and sustainable farming techniques, ensuring that their products meet the rigorous requirements of international buyers. Partnerships between government and industry can play a pivotal role in offering technical support and financial assistance, making it easier for farmers and exporters to achieve compliance. Adhering to enhanced quality standards, Tanzanian avocados can build a reputation for excellence, expand their market reach, and potentially command premium prices, benefiting the entire supply chain from producers to exporters.

**Market linkages and information access:** Developing digital platforms and services to provide Tanzanian avocado producers with reliable market data and direct connections to buyers is essential for enhancing the country's export potential. Access to accurate, up-to-date information on global prices, demand trends, and buyer requirements enables producers and exporters to make informed decisions and respond effectively to shifting market conditions. The ITC tools are valuable resources in this regard, offering data on trade flows, tariffs, and regulatory requirements. These tools allow producers and exporters to access comprehensive information on potential export markets, helping them identify opportunities and tailor strategies to meet importer standards. This insight is supported by Akgun (2023). Leveraging these tools, Tanzanian avocado farmers can strengthen market linkages, connecting more easily with both regional and international buyers. This improved connectivity and market insight will ultimately bolster Tanzania's position in the global avocado industry, enabling the sector to realize its full potential.

**Research and development (R&D):** Investing in research and development is essential for advancing Tanzania's avocado industry. Support for R&D initiatives focused on developing high-yield, disease-resistant avocado varieties are crucial for boosting productivity and reducing crop losses, as noted by Möller et al. (2025). These efforts should prioritize breeding avocado varieties that are specifically suited to Tanzania's diverse climates and soil types, ensuring strong growth and resilience to local pests and diseases. R&D in sustainable farming practices is vital. Promoting eco-friendly techniques such as efficient water management, organic pest control, and soil conservation can help Tanzanian farmers improve both yield and product quality while minimizing environmental impact. Collaboration with agricultural research institutions, universities, and international partners will be key to driving innovation and disseminating best practices among local farmers. These R&D initiatives not only enhance production efficiency but also position Tanzanian avocados as high-quality, sustainably produced exports, appealing to environmentally conscious global markets and boosting the country's competitive edge.

## Conclusion and Recommendations

Tanzania's avocado sector (Tanzania's green gold) holds immense potential to become a cornerstone of the country's agricultural export portfolio, significantly contributing to economic growth and rural development. While the sector has experienced remarkable growth in export values over recent years, its position in the global avocado market remains underutilized, highlighting the need for deliberate and strategic interventions to unlock its full potential. Grounded in the comparative advantage theory, Tanzania possesses a natural edge in avocado production due to its favorable agro-climatic conditions, lower production costs,

and competitive labor market. This comparative advantage suggests that by focusing on exporting avocados, Tanzania can allocate resources more efficiently, maximizing gains from international trade. However, realizing this potential requires addressing supply-side constraints and enhancing market access competitiveness. This study highlights substantial untapped opportunities in high-potential international markets, particularly in Europe, the Middle East, and Asia, where demand for high-quality avocados continues to rise. However, infrastructure gaps, particularly in cold chain logistics, and limited adherence to international quality standards hinder Tanzania's ability to fully capitalize on its comparative advantage. Employing the GVC theory and leveraging ITC tools, this research emphasizes the need for a comprehensive, multifaceted strategy. Such an approach would help overcome trade barriers, optimize supply chain efficiency, and enhance Tanzania's global competitiveness in the avocado market, ensuring that its comparative advantage translates into sustained export growth and economic benefits.

To enhance the product-level competitiveness of Tanzania's avocado sector in global markets, several strategic interventions are essential. Investment in cold chain infrastructure is critical to maintaining product quality and reducing post-harvest losses, thereby ensuring the sector's ability to compete in high-value markets. Simultaneously, improving compliance with international standards is necessary to enable smallholder farmers and exporters to meet quality and safety requirements, and organic certifications, facilitating access to premium markets. Promoting value addition through the development of products like avocado oil and processed foods can diversify export offerings and increase profitability. Market diversification should also be prioritized by targeting high-potential markets in Europe, the Middle East, and Asia, as identified by ITC tools, to reduce reliance on traditional destinations. Additionally, capacity building is vital. Training for farmers and exporters on market requirements, trade regulations, and sustainable practices, coupled with strong collaboration among stakeholders, can strengthen the sector. Also, trade facilitation measures, including streamlining customs procedures, negotiating trade agreements, and improving access to finance, will help address existing barriers and promote seamless export operations. Implementing these recommendations, Tanzania can maximize the economic and developmental benefits of its avocado sector, improve rural livelihoods, and solidify its position as a competitive global player in the agricultural export market.

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