

United Republic of Tanzania



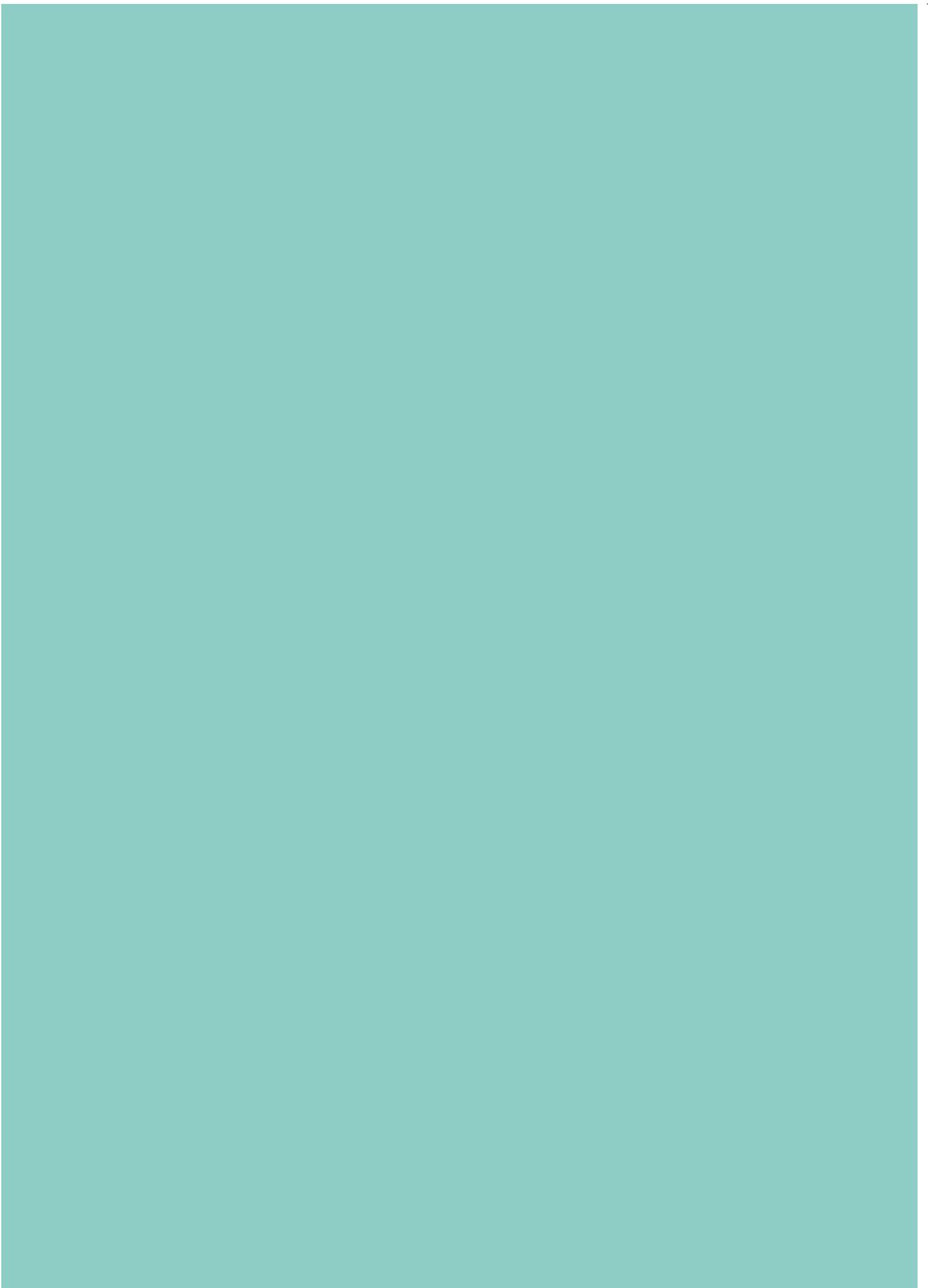
Ministry of Agriculture



# Fiscal Reform Options and their Effects on the Edible Oil Sector in Tanzania: A Cost Benefit Analysis



HUB FOR AGRICULTURAL POLICY ACTION (HAPA)



United Republic of Tanzania



Ministry of Agriculture

# Fiscal Reform Options and their Effects on the Edible Oil Sector in Tanzania: A Cost Benefit Analysis

August 2022

## Correct Citation

HAPA.2022. Fiscal Reform Options and their Effects on the Edible Oil Sector in Tanzania: A Cost Benefit Analysis. The Hub for Agricultural Policy Action (HAPA), AGRA, Nairobi, Kenya.

## ABOUT AGRA

AGRA is an African-led non-profit organization formed in 2006 in response to the call by former UN Secretary-General Kofi Annan for a uniquely African green revolution. AGRA's vision is to transform agriculture from a solitary struggle to survive into farming as a business that thrives, putting farmers at the center of the continent's growing economy. AGRA recognizes that developing smallholder agriculture into a productive, efficient, and sustainable system is essential to ensure food security, lifting millions out of poverty and driving equitable growth across the continent. AGRA's mission, therefore, is to catalyze and sustain an agricultural transformation in Africa through innovation-driven productivity increases and access to markets and finance that improve the livelihoods of smallholder farmers. We achieve this mission with and through partners. The alliance has built the systems and tools for Africa's agriculture; high-quality seeds, better soil health, access to markets and credit, and coupled with stronger farmer organizations and agriculture policies.

## About HAPA

Across African countries today, there is a need for better, more timely use of evidence, and more targeted approaches, to improve the quality of policymaking by governments. The Hub for Agriculture Policy Action (HAPA), is a Unit within AGRA that provides policy advisory services to governments seeking to reform, refine, and/ or develop a more clearly defined policy direction. The approach recognizes the urgent need for timely policy support to the agriculture sector, which plays an important role in ensuring inclusive growth. It also recognizes the demands for political expediency and the need to ensure that a particular policy direction is anchored in evidence.

The purpose of the Hub for Agriculture Policy Action (HAPA) is to support AGRA to catalyze and sustain an inclusive agricultural transformation in Africa to increase incomes and improve food security of millions of Africans. The creation of HAPA was in response to a noticeable gap in the utilization of evidence within the policy-making cycle to drive policy change. Through Consolidation and Translation (C&T) of evidence, HAPA's work entails collating existing evidence, expertise and best practice that are relevant to a government request for policy support and processing these into a set of rationalized and costed policy options. Through HAPA, AGRA aims to increase the use of evidence to inform decisions for policymaking and implementation. HAPA works with local partners such as research actors to collate existing data and evidence, expertise, and best practices that respond to a government request for policy support and package these into a set of actionable policy recommendations.

## Acknowledgement

We acknowledge the following people and institutions for their support: The Ministry of Agriculture: Gungu Mibavu, Steven Kiwele; The Hub for Agricultural Policy Action (HAPA), AGRA: Dr Paul Thangata, Vianey Rweyendela, Dr Davis Muthini, Dr Abdoulaye Djido, Sibusiso Nhlengethwa, Liston Njoroge; University of Dar es Salaam: Dr Remidius Ruhinduka, Dr Martin Chgere, Dr Innocent Pantaleo, Dr John Mtui.

## Comments

Comments, suggestions as well as requests for clarification of information contained in this report are welcome and should be addressed to: [AGRAHAPA@agra.org](mailto:AGRAHAPA@agra.org)

Supported by

**BILL & MELINDA**  
**GATES** *foundation*

# Table of Contents

Abbreviations and acronyms	IV
Foreword from Minister for Agriculture	V
Note from AGRA President	VI
Note from Vice-President Policy and Advocacy Division	VII
Executive summary	VIII
<b>1 Introduction</b>	<b>1</b>
1.1. Background	1
1.2. Objectives of the study	2
<b>2 Methodology</b>	<b>3</b>
2.1. Study design	3
2.2. Data source and collection approaches	3
2.3. Analytical approaches used	3
<b>3 Findings - Descriptive statistics</b>	<b>6</b>
3.1. Edible oils production and consumption in Tanzania	6
3.2. Edible oils importation trends	6
3.3. Implications of import duty reforms on edible oils in Tanzania	9
3.4. Edible oils exports: Trends in quantity and value	12
3.5. Tax revenue collections from imported edible oils	12
<b>4 Findings - Analytical results</b>	<b>15</b>
4.1. Fiscal measures	15
4.2. Non-fiscal measures	23
<b>5 Conclusions and recommendations</b>	<b>26</b>

# Abbreviations and acronyms

ACG	Agricultural credit guarantee	OPV	Open-Pollinated Variety
AGF	African Guarantee Fund	PASS	Private Agricultural Sector Support
AMDT	Agriculture Markets Development Trust	PAYE	Pay as you earn
ASDP II	Agriculture Sector Development Programme II	RIF	Rural Innovation Fund
ASA	Agricultural Seed Agency		Rural Livelihood Development Programme
CET	Common external tariff	RLDP	Programme
CGS	Credit guarantee schemes	SADC	Southern African Development Community
CIF	Cost, Insurance and Freight	SAGF	Sustainable Agriculture Guarantee Fund
EABL	East African Breweries Limited	SBL	Serengeti Breweries Limited
EACCU	East African Community Customs Union	SCGS	Smallholder Farmers Credit Guarantee Scheme
EAC	East African Community	SDL	Skills Development Levy
ECGS	Export Credit Guarantee Scheme	SGR	Standard gauge railway
FYDP III	Five Year Development Plan III	SME	Small and medium enterprises
GDP	Gross domestic product	TASUPA	Tanzania Sunflower Processors Association
ICT	Information and communication technology	TOSCI	Tanzania Official Seed Certification Institute
ITC	International Trade Centre	TBL	Tanzania Breweries Limited
	Mwiwata Agricultural Marketing Information System	TRA	Tanzania Revenue Authority
MAMIS		TZS	Tanzania shillings
MoA	Ministry of Agriculture	USD	United States Dollars
MT	Metric Tonnes	URT	United Republic of Tanzania
NBS	National Bureau of Statistics	VAT	Value added tax
NGO	Non-governmental organization		



## Foreword from Minister for Agriculture

Tanzania's annual demand for edible oils is estimated at 570,000 tonnes, while domestic production is only about 205,000 tonnes. The deficit of almost 365,000 tonnes is covered by imports. The heavy tax burden affects the competitiveness of Tanzania's agriculture and agro-processing industry as farmers and investors cut investment in land, technology, and labour to compensate for the costs imposed by the taxes. Beyond the level of taxation and levies charged on the sector, producers and agro-processors are faced with a complex and unpredictable tax system that increases the transaction costs of compliance.

In its efforts to increase domestic production of edible oils and improve the welfare of actors along the entire value chain of the edible oil industry, the government in the 2017/18 financial year increased the import duty on crude edible oils from 10 to 25% and that of semi-refined and refined edible oils from 25 to 35%. The intention was to increase the relative prices of imported oils and hence increase the market competitiveness of domestically produced edible oils. However, the effect of the reforms has instead been an increased final price of the edible oils in the country, coupled with global hyperinflation, which has contributed to a significant increase in consumer prices.

To drive investment in agricultural production and agro-processing, the government of Tanzania has committed to creating a farmer-friendly tax regime, simpler to administer and comply with. Consequently, the Ministry of Agriculture in Tanzania requested AGRA through the HAPA initiative to support a study to

inform the government on key elements that will foster a better business environment in the sector, with an initial focus on fiscal challenges and reforms.

Phase 1 of the project focused on the fiscal incentives to bolster the use of locally produced raw materials in the breweries sector. In Phase 2, the Ministry of Agriculture was interested in understanding the effect of proposed fiscal reforms to enhance the affordability of imported edible oils while increasing sunflower production for domestic and international markets. The proposed fiscal reforms involve a reduction of import duties on edible oils back to their original values, that is, 10% for crude and 25% for refined, while also removing value-added tax (VAT) on domestically produced edible oils including sunflower.

The study first assessed the effect of the tax reforms of the 2017/18 financial year and found that the tax reform resulted in within-product substitution accompanied by the switch from importing crude oil to refined oil. Using a cost-benefit analysis framework, this study estimated the implications of various fiscal reforms and proposed various options of fiscal measures for the government to consider, as well as other non-fiscal measures that would unlock the potential of the edible oil sector.

The Ministry of Agriculture is grateful for the support of AGRA through HAPA that made this work possible. It is testimony to the successful partnership between the government of Tanzania and development partners, particularly AGRA.

**Hon. Hussein M. Bashe**  
Minister for Agriculture



## Note from AGRA President

The combined impact of climate change, COVID-19 pandemic-induced runaway inflation, and the trade disruptions resulting from the Russia-Ukraine crisis have disrupted food systems and affected the food security of millions of people across the globe. The most affected crops are edible seed oils and cereals such as barley, maize, and wheat. Low-income and developing nations in Africa are the most affected due to the fragility of their food systems.

Many countries are faced with high debt levels and pressing financing needs. Several of them have debt equal to 70% of their GDP or more, which narrows the fiscal space and makes temporary subsidies on fuel, fertilizers, and food products unmanageable. Social safety programs that targeted vulnerable families, especially during the peak of COVID-19 control measures are becoming unsustainable.

Given the challenges, Africa's food systems must evolve and adapt to adequately respond to the unprecedented challenges being experienced globally and on the continent. Africa is heavily affected by global shocks because it is a net food importer. Intra-Africa trade is quite low given that African countries trade with other continents than they trade with other African countries. The African Continental Free Trade Area (AfCFTA) and other regional trading blocs provide an opportunity

to change this situation by reducing barriers to intra-African trade. African countries must take this opportunity to trade more amongst themselves and become food sufficient.

AGRA is working with African governments and institutions to catalyse an agricultural transformation in Africa improving yields using innovation and technology and improving access to markets and finance that improve the livelihoods of smallholder farmers. AGRA is also working with governments to reform agricultural policies and create a business-friendly environment for farmers and investors alike. The Hub for Agricultural Policy Action is an initiative of AGRA and its partner, the Bill and Melinda Gates Foundation to support governments in generating and consolidating evidence to inform policy.

The Ministry of Agriculture in Tanzania is one of the first institutions to partner with AGRA through the HAPA initiative. The partnership has seen HAPA support the Ministry through analysis of data to inform various fiscal reforms in the breweries and edible oil sectors in the country. This model of evidence-based policy and decision-making is a welcome departure from previous systems where the policy was informed more by political expedience than data and evidence.

**Dr. Agnes Kalibata**  
President, AGRA



## Note from Vice-President Policy and State Capability Division

HAPA is a distinct service offering by AGRA to provide policy consolidation and translation advisory services to governments seeking to reform, refine or develop a more clearly defined policy direction. The project has two outcomes (1) Improved policy environments for enabling Inclusive Agricultural Transformation (IAT) in participating countries, and (2) Timely and more responsive processes for improving Inclusive Agricultural Transformation (IAT) regarding relevant policies in participating countries. The intermediate outcomes are: (1) Adoption of policy recommendations for enabling Inclusive Agricultural Transformation (IAT) in participating countries, and (2) timely and reliable evidence on policy alternatives produced, (3) local capacity on evidence-based policy making process enhanced, and (4) The Consolidation and Translation (C&T) approach applied by a critical mass of actors – including local and international policy partners.

To fast-track agriculture transformation in Africa, AGRA had envisioned HAPA as a vehicle to respond to government requests for support. Through Consolidation and Translation (C&T) of evidence, HAPA's work entails collating existing evidence, expertise and best practice that are relevant to a government request for policy support and processing these into a set of rationalized and

costed policy options. The HAPA Initiative was designed as a service desk with the ability to respond quickly to requests for support dealing with policy constraints lasting from 2 to 6 months (short term support). HAPA may also provide policy support of up to 1-year (considered medium term support) to address complex policy challenges, guiding government and providing continuous advice on request through to the adoption of the policy.

Therefore, HAPA's operating model recognizes the urgent need for timely policy support to the agriculture sector, which plays an important role in ensuring inclusive growth. It recognizes the demands for political expediency and the need to ensure that a particular policy direction is anchored in evidence. The approach also addresses the challenge posed by the high turnover of senior government decision makers by engaging local capacity and building on existing knowledge and partnerships. The model also prioritizes coordination and partnerships for delivery. Within AGRA's Policy and State Capability (PSC) division, HAPA works with its sister units, viz: Policy and Advocacy, State Capability and Regional Food Trade. Hence, as part of the PSC, HAPA's activities are aligned and work collaboratively with the other units to supporting overall efforts by PSC.

**Dr. Apollos Nwafor**  
Vice-President, PSC, AGRA

# Executive summary

Tanzania's annual demand for edible oils is estimated at 570,000 tonnes, while domestic production is only about 205,000 tonnes<sup>1</sup>. The deficit of almost 365,000 tonnes is covered by imports. In its efforts to increase domestic production of edible oils and improve the welfare of actors along the entire value chain of the edible oil industry, the government increased the import duty on crude edible oils from 10 to 25% and that of semi-refined and refined edible oils from 25 to 35% in the 2017/18 financial year. This was mainly designed to increase the relative prices of imported oils and hence increase the market competitiveness of domestically produced edible oils.

However, there has been no significant increase in domestic production of edible oils nor any significant drop in the volume of imported oils in Tanzania. The consequence of the reforms has instead been an increased final price of the edible oils in the country, the burden that largely falls to the final consumers, the majority of whom are poor. At the same time, the increased tax rates were not successful in significantly altering the relative price of the two oil products, with sunflower oil prices remaining higher than those of palm oil.

It is against this background that the Ministry of Agriculture proposed fiscal reforms to enhance the affordability of imported edible oils while increasing sunflower production for domestic and international markets. The proposed fiscal reforms involve a reduction of import duties on edible oils back to their original values, that is, 10% for crude and 25% for refined, while also removing value added tax (VAT) on domestically produced edible oils including sunflower. The governing hypothesis is that while the former would lower the final price of imported oils (of which palm oil is dominant) and hence increase their affordability to most poor Tanzanians, the latter will lead to increased competitiveness of the domestically produced sunflower in the international markets. To provide evidence to back this decision, the Ministry of Agriculture commissioned this study to test this hypothesis and assess the costs and benefits of various fiscal options at the government's disposal. While

the direct revenue losses from such tax reductions are obvious, there are several other revenues and non-revenue gains that will come with such reforms.

The study first assessed the effect of the tax reforms of the 2017/18 financial year. Consistent with expectations, there was a significant (17%) decline in imported edible oils between 2018 and 2019, the exact year that the reform took place. The amounts of imported edible oils have consistently remained low and declined since then (for instance, 4% decline between 2019 and 2020) or just a marginal growth rate but at low absolute values (for instance, 1% growth between 2020 and 2021). Further, while an increase in the import duty lowered the average imported quantity of crude palm oil by 98%, it resulted in an increase in the importation of refined palm oil by 459% within the same period. Similarly, while the imported crude sunflower oil declined by 93%, that of refined sunflower increased by 347%. Therefore, the tax reform resulted in within-product substitution accompanied by the switch from importing crude oil to refined oil. Thus, the reform may have successfully addressed the potential challenge of some companies to strategically misreport imported refined oil as crude oils. Oil exports fell drastically to 29,000 tonnes in 2016 (an annual decline of 827%) and continued to sharply decrease to only 9,000 tonnes in 2021. Thus, the demand-supply gap for edible oils in the country was covered by domestic production.

Using a cost-benefit analysis framework, this study estimated the net impact of the proposed reforms on the Tanzanian economy. The analysis begins by considering the implication of various fiscal reforms, classified as alternative scenarios. While the first scenario considers a situation when partial reduction is made on import duty chargeable on imported crude and refined edible oils (going back to pre-2017/18 reform), the second scenario considers a situation of complete removal of import duties on the same (i.e., zero-rating). The third scenario considers just the removal of VAT on locally produced sunflower oils (i.e., zero-rating of VAT) while retaining the current import duty rates on the imported edible oils. The fourth scenario considers a hybrid reform that constitutes both

<sup>1</sup> Ministry of Agriculture, 2021

the reduction of import duty on imported sunflower and palm oils while also removing VAT on locally produced sunflower oil. In addition to fiscal measures, the study also considers the potential and implications of various non-fiscal measures.

The partial reduction of import duty on imported palm and sunflower oils from 25% for crude oil and 35% for refined oil to 10 and 25% respectively, will result in a welfare improvement to consumers that outweighs the losses in government revenue. With the current importation estimated at 365,000 tonnes, the consumer surplus gained will be at least 140 billion Tanzanian shillings (TZS), against a government revenue of TZS 139 billion loss from import duty in the first year. Reduction of import duty will also reduce “imported inflation”, thus cushioning consumers from the soaring Cost, Insurance and Freight (CIF) of edible oils (and many other products) following the COVID-19 pandemic and the effects of the Russia-Ukraine conflict.

The second scenario was a complete removal (zero-rating) of import duty on imported palm and sunflower oils. All the potential amount that was to be collected from the importation of palm and sunflower oils will be lost, hence making it an unlikely option for the Ministry of Finance and Planning. Furthermore, the complete removal of import duty will cause a challenge to the common tariff rates under the East African Community Customs Union (EACCU) due to the weak implementation of rules of origin.

The third scenario is the removal of VAT on domestically produced sunflower oil for 3 years. Zero-rating VAT on crude and refined sunflower oil from domestically produced sunflower oil seeds will lower the price of sunflower oil, hence increasing the demand. This in turn is expected to increase domestic production and supply of sunflower oil seed, and crude and refined sunflower oil by 26% annually during the intervention period. This option will, however, lead to a revenue loss of TZS 20.5 billion, TZS 19.7 billion, and TZS 19.9 billion during the first, second, and third years respectively, after VAT removal. When VAT is returned, after the third year, and when the industry operates at a higher level of production, positive net gains will continue, estimated to be TZS 23.1 billion and TZS 24.0 billion in the fourth and fifth year respectively, compared to the situation without VAT removal. This implies that while in the short term the government will experience a decrease in expected net revenue, the mid- and long-term effect will be characterized by an increase in expected net revenues compared to the situation without any intervention. Further, there will

be gains and losses in terms of employment. For this intervention to be successful, production constraints should be unlocked.

The fourth scenario combines the two previous scenarios, the removal of import duty and VAT. It also covers a period of fiscal change implemented for 3 years. Considering the reduction of import duty (to 10% for crude edible oil and 25% for refined edible oil) and removal of VAT, this intervention will reduce the domestic price of edible oil in Tanzania. The resulting consumer surplus will outweigh the government losses in the first year of the intervention (TZS 175.5 billion) if the pass-through rate is at least 72%, and if 10% of crude sunflower oil (12,600 tonnes) and 50% of refined sunflower oil (27,000 tonnes) is traded under the VAT system. If VAT is zero-rated and the pass-through rate is 72%, then the price will be reduced by 13%, leading to a consumer surplus of about TZS 31.7 billion. What this implies is that if suppliers of edible oil were to lower the domestic prices by at least 72% of import duty and VAT reduction, the consumer surplus will outweigh the government revenue collection loss and the net welfare will be positive.

However, as argued earlier, the reduction in VAT is only feasible if production responds to the incentive. Current production constraints make it unlikely for producers to respond immediately. This is evidenced by the previous intervention to increase production by increasing import duties on edible oils that did not materialize domestically. It is therefore recommended that the intervention be implemented in a phased approach, starting with the reduction of import duty which has a potential direct effect on consumer welfare followed by zero-rating VAT after mitigating production constraints.

Farmers fail to respond to fiscal incentives to increase production due to low prices and a small profit margin compared to other players due to their price-taking position in the value chain, among other reasons. Currently, farmers sell sunflower oil seeds between TZS 700-1,300 per kilogram, earning a paltry profit margin of TZS 48,000 per tonne of sunflower seed produced. A large proportion of farmers sell at the lowest price point during harvest season due to the immediate need for cash and the lack of warehouses for storage. With a yield of about one tonne per hectare, farmers, therefore, earn TZS 48,300 per hectare of sunflower. This largely discourages farmers from expanding production or investing in improving productivity. But it also implies that yield increases are fundamental in unlocking per hectare gross margin increases for farmers.

The analyses of these aspects, therefore, lead to the proposition that non-fiscal measures be instituted along with the fiscal incentives. These measures include:

- i) *Improve agronomic practices:* Ensure availability of high yielding and high oil content seeds; empower extension officers to train farmers on the proper use of fertilizers, spacing, and timely planting among other good agricultural practices; promote mono-cropping and irrigation; and use of improved beekeeping to increase income and enhance pollination and increase yields.
- ii) *Encourage commercial farming:* Regions and local government authorities should set aside land for commercial farming and avoid bureaucratic processes in accessing village land for commercial farming, promote block farming and medium-scale production to ensure effective support services and commercialization, curb the high rate of crop theft and post-harvest loss during harvesting window and cut the existence of very powerful middlemen/traders who are exploiting farmers. This may entail the introduction of a vibrant warehouse receipt system.
- iii) *Promote contract farming:* The Ministry of Agriculture and local governments should put in place by-laws that enhance compliance in contract farming and create awareness of the importance of contract farming in hedging both farmers and processors against price risk and ensuring a good price for farmers and at the same time a fair cost to buyers.
- iv) *Unlocking quality constraints:* This entails enforcing the use of standards and measures (weighing scales) and awareness campaigns on the differences between crude and (double) refined oil as well as the associated health effects.

# 1 | Introduction

## 1.1. Background

Tanzania's annual demand for edible oil is estimated at 570,000 tonnes, while domestic production is only about 205,000 tonnes<sup>2</sup>. Imports account for the almost 365,000 tonnes deficit. Over the past 5 years, the share of imports of oil by value was as follows: palm oil (56%), soybean oil (23 %), and sunflower oils (7 %)<sup>3</sup> (TRA, 2021).

In its efforts to increase domestic production of edible oils in the country and improve the welfare of actors along the entire value chain of edible oils, the government increased the import duty on crude edible oils from 10 to 25% and that of refined edible oils from 25 to 35% during the 2017/18 financial year. This was mainly designed to increase the relative prices of imported oils and hence bolster the market competitiveness of domestically produced edible oils. Despite the increased import duty, there has been no significant increase in domestic production of edible oils nor has there been any significant drop in the volume of imported oils in Tanzania to date. The consequence of the reforms has instead been an increased final price of the edible oils in the country, a burden that largely falls on the consumers, the majority of whom are poor.

On the other hand, despite the increased relative price of imported palm oil in Tanzania, the production, productivity, and area under sunflower have gradually decreased. Further, the increased tax rates were not successful in significantly altering the relative price of the two oil products, with sunflower oil prices remaining higher compared to that of palm oil. Specifically, while the current unit price of refined palm oil is TZS 5,300 per litre, the price for double-refined sunflower stands at TZS 6500 per litre. As a result, sunflower oil continues to be consumed by only high-end customers.

The national poverty rate is estimated to have declined marginally from 27.1% in 2020 to 27% in 2021, driven

by the recovery of employment and nonfarm business revenue<sup>4</sup>. Further evidence indicates that, based on the international extreme poverty line of US\$PPP 1.9 per day, poverty in Tanzania remains at 49.4% of the population (26 million people)<sup>5</sup>. Therefore, the price of sunflower oil is beyond the purchasing power of most Tanzanians.

It is against this background that the Ministry of Agriculture proposes fiscal reforms to enhance the affordability of imported cooking oil while increasing sunflower production for domestic and export markets. The proposed fiscal reforms involve a reduction of import duties for edible oils back to their original values of 10% for crude and 25% for refined while also removing VAT on domestically produced edible oils including sunflower oils. The governing hypothesis is that while the former would lower the final price of imported oils (of which palm oil is dominant) and hence increase their affordability to most poor Tanzanians, the latter will lead to increased competitiveness of the domestically produced sunflower in the domestic and international markets.

To provide evidence to back this decision, the Ministry of Agriculture commissioned this study to test this hypothesis and assess the costs and benefits of various fiscal options at the government's disposal. Importantly, edible oil imports have significant revenue implications for the government through the taxes it collects. Recent statistics, for example, show that the government collects nearly TZS 115 billion per annum from the cooking oil import duty alone chargeable as the percentage of the total imported value. Reforms are likely to come with several other benefits to the government, both fiscal and non-fiscal. For example, lowering the import duty of palm oils is likely to increase the importation volumes to counterbalance the revenue loss by the reduced import duty. In addition, such increased volumes will translate to more corporate income taxes and VAT collection from the palm oil

<sup>2</sup> Ministry of Agriculture, 2021

<sup>3</sup> Tanzania Revenue Authority, 2021

<sup>4</sup> World Bank (2021) Poverty and Equity Brief, Africa Eastern and Southern, Tanzania, April

<sup>5</sup> World Bank (2021) Poverty and Equity Brief, Africa Eastern and Southern, Tanzania, April

processing companies, among others. On the other hand, removal of VAT on sunflower oils could result in increased production and hence corporate income taxes, crop cess, personal income tax, etc. Non-fiscal benefits attributable to such reforms may include increased employment opportunities and industrialization.

Whether the government buys into the proposed reforms depends on the net impact. This report used a cost-benefit analysis to provide empirical evidence on the viability of such reforms and recommendations for policy actions.

## 1.2. Objectives of the study

The general objective of this study is to undertake a systematic assessment of the costs and benefits of proposed fiscal reforms within the edible oils industry. Specifically, this analytical exercise aimed to:

- i. Undertake a comprehensive assessment of the current state and dynamics of edible oil domestic production, importation, exportation, and associated tax revenues in Tanzania.

- ii. Undertake a cost-benefit analysis for the reduction of import duties on crude and refined palm oils in Tanzania.
- iii. Undertake a cost-benefit analysis for the removal of VAT on domestically produced sunflower oil.
- iv. Undertake a cost-benefit analysis for jointly reducing the import duties on palm oils and removal of VAT on domestically produced sunflower oil.
- v. Identify other non-tax measures that would sustainably develop the edible oil value chain/industry in Tanzania.
- vi. Provide policy recommendations on the most appropriate reform (tax or non-tax) that should be championed/undertaken by the government of Tanzania.

The report is organized as follows: chapter 2 provides the methods used; chapter 3 and 4 present the descriptive and analytical results respectively. Chapter 4 presents conclusions and recommendations to inform policy.

# 2 | Methodology

## 2.1. Study design

Mixed methods (quantitative and qualitative) were used. While the quantitative design estimates and quantifies the amounts and direction of the proposed fiscal regime changes across an array of outcome indicators, the qualitative approach complements the quantitative aspects by bringing in the non-fiscal responses that may affect the various policy regimes in the edible oil sub-sector.

## 2.2. Data source and collection approaches

This study largely utilized secondary data to generate data on production, imports, exports, and taxes for various edible oils in the country. Primary data was mainly collected through in-depth interviews with key informants (oil producers of different sizes, importers, exporters, and sunflower farmers). Major sources of the secondary data were the Tanzania Revenue Authority (TRA) and the Ministry of Agriculture.

## 2.3. Analytical approaches used

### 2.3.1. Fiscal measures approach

#### Cost-benefit analysis

The study explored the implication of various fiscal reforms on net government revenue and several other non-revenue outcomes along the edible oils value chains from a policy planner's standpoint. The cost of the fiscal reforms discounted over time is compared to the discounted benefits. The difference between the two indicates the implied net impact on the economy from such reform.

While this approach captures the upfront and subsequent loss from the government standpoint, it is important to assert that it provides the potential minimum benefits to be accrued in the economy due to the inability to capture some of the indirect benefits. For example, despite the observable direct jobs impacted by the reforms (hence associated taxes), the reforms could create several other indirect jobs in other sectors linked

to the value chain that are not captured in the analysis. It is therefore important to translate the results to represent the lower bound of the potential net impacts of the reforms.

#### Analytical scenario

The analysis considered the different regimes/scenarios that represent different states of fiscal regimes in the edible oils industry, a comparison of which entailed the potential impacts of the reform. The first was the baseline scenario where the current fiscal status operates. Other alternative scenarios captured different fiscal policy interventions, each of which reflects a regime with a different rate of taxes compared to that of the baseline regime (either marginal or joint interventions). Specifically, the alternative scenarios includes:

- Lowering the import duty of imported crude palm oil from 25% back to 10% and imported refined palm oil from 35% back to 25%.
- Zero-rating VAT on domestically produced sunflower oil for 3 years from 2022/23 to 2024/25.
- A combination of the two interventions above.

The gains/losses due to the interventions were obtained by comparing their outcomes to the baseline scenario.

#### Pass-on rate

The fiscal changes introduced may be passed on in full to consumers in the form of lower prices, or manufacturers and retailers may absorb some of the duty/tax reduction by increasing price margins. In some other cases, a pass-on rate may even exceed 100% if consumer prices fall by more than the duty/tax reduction. For this study, a pass-on rate of 100% was assumed and evaluated. Other lower and higher rates in the sensitivity analysis were considered.

#### Price elasticities

Price elasticity refers to the rate of response of the quantity of a good demanded when the price increases. Own-price elasticity measured the changes in demand for sunflower and palm and other edible oils that

occurred in response to price changes of the same good. Cross-price elasticity measured the change in purchases that occurred for other edible oils in response to price changes of one type of edible oil. Price elasticities were obtained from previous studies.

### Consumption, production, and import and export changes

The fiscal interventions were expected to affect the prices of sunflower and palm oil, and in turn, affect the consumption level and the relative competitiveness of imported edible oils to domestically produced edible oils. The changes in VAT on domestically produced edible oils were to affect the consumption level and the relative competitiveness of domestically produced edible oils to imported edible oils. This was expected to affect the domestic production of oil seeds<sup>6</sup>. The gap between local demand and domestic production was to determine the amount to be imported.

### Government revenue, employment, and welfare effects

Revenue loss from lower import duty and VAT zero-rating may lead to direct losses of revenue that could have been collected if those duties/taxes were not removed. It may also lead to losses in VAT, corporate tax, and pay as you earn (PAYE) due to lower production of edible oils from other oil seeds such as cotton and sesame. Imports may increase by lowering import duty, which may increase the revenue from import duty and corporate tax from importers. On the other hand, the government may earn more revenue from corporate tax and PAYE from the sunflower oil production industries. The consumer surplus due to lower prices was calculated as a proxy for the welfare effect.

### 2.3.2. Non-fiscal measures approach

For this approach, the study used information from literature and field data. The information was collected, verified, and assessed, and the identified intervention was prioritized.

### 2.3.3. Key assumptions

In assessing the fiscal interventions on crude and refined sunflower and palm oil, the following assumptions were made (the source of information governing each of the assumptions is provided in brackets):

- At baseline, sunflower, and palm oils each account for 48% of total edible oil consumption by volume<sup>7</sup> (BFAP 2018).
- About 92% of domestically produced edible oil is sunflower oil<sup>8</sup> while palm oil accounts for 1.5%.
- About 75% of domestically produced sunflower oil seeds go into sunflower oil production (field information).
- Only 3% of domestically produced sunflower oil is exported (field information).
- About 80% of domestically produced palm oil goes into oil production (field information).
- The price of 1 kg of sunflower oil seed is TZS 850 (field information).
- The conversion rate of sunflower seed into sunflower oil is 30 (field information).
- About 30% share of sunflower oil is refined while 70% remains crude (field information).
- The average price of refined sunflower oil is TZS 6,500 per kilogram while the average price of crude sunflower oil is TZS 5,500 per kilogram (field information).
- The average price of refined palm oil is TZS 5,300 per kilogram while the average price of crude palm oil is TZS 4,500 per kilogram (field information).
- The average import prices of refined and crude sunflower oils are 40% of the final market price (TRA data and field information).
- About 50% of the domestically produced refined sunflower oil is marketed under the VAT registered system, while 10% of crude sunflower oil is captured under VAT.

6 Mgeni P. C., Müller, K., & Sieber, S. (2019). Reducing Edible Oil Import Dependency in Tanzania: A Computable General Equilibrium CGE Approach. *Sustainability*, 11(16), 4480.

7 BFAP (2018) Prioritizing Policies for Driving Inclusive Ag Transformation: Tanzania Pilot Study Output 4: Value Chain Analysis: Identifying Public and Private Sector Investments Final draft, Mimeo

8 Olabisi M., Tschirley D. L., Nyange D., and Awokuse T. (2018). The Challenge of Substituting Sunflower Oil for Imported Palm Oil: Evidence from Tanzania, Food Security Policy Research Papers, Research paper 99.

- Sunflower oils' short-term own-price elasticity is estimated at -0.79, while the cross-price elasticity with palm oil is 0.21 and 0.23 for other oils (Olabisi et. al. 2018). For the simplicity of other oil, the cross-elasticity for both palm and other oils was 0.22.
- Consumption of edible oil grows by 5% annually (USAID, 2017)<sup>9</sup>.
- On average, one hectare of sunflower is operated by two people.
- The number of formal jobs in the whole of the sunflower value chain is 5% of the total number of sunflower operators.
- The formal jobs along the sunflower value chain will pay on average a basic salary of TZS 6 million per year (field information).
- The average PAYE tax rate paid by formal jobs in the whole of the sunflower value chain is 12% of the basic salary.
- On average, a cess of 2% of the value of sunflower oil seed is charged to all the sunflower oil seed produced.

<sup>9</sup> USAID (2017): Feasibility Study for the Edible Oils Sector in Tanzania Summary of Field Research, [https://pdf.usaid.gov/pdf\\_docs/PA00WCBF.pdf](https://pdf.usaid.gov/pdf_docs/PA00WCBF.pdf) (last assed, 20th June 2022)

# 3 Findings - Descriptive statistics

## 3.1 Edible oils production and consumption in Tanzania

There are five major oil crops in Tanzania, namely, sunflower, sesame, groundnuts, palm, and cotton. Palm oil has the largest domestic market share (over 60%), with approximately 90% of it being imported. Sunflower accounts for the largest share of domestically produced oil<sup>10</sup> and is the second-largest consumed edible oil. The sunflower oil produced by local processors only meets 40% of the national edible oil requirements<sup>11</sup>.

Production of edible oils has remained low due to the unavailability of sufficient raw materials in the country. Non-adherence to good agricultural practices - such as the use of poor-quality seeds, low usage of fertilizer, and poor control of pests and diseases - accompanied by the predominance of small-scale subsistence farming has often led to low yields. Statistics show a decrease in the total area under sunflower cultivation from 754,000 ha in 2010 down to 558,000 ha in 2018 (a 26% decline), leading to a reduction in production from 787,000 to 561,000 tonnes (see Table 1). Consequently,

most of the sunflower processing industries (both large and small) operate below their potential capacity in any given year<sup>12</sup>. However, the cost of producing sunflower oil in Tanzania is lower than other oilseed crops<sup>13</sup>. In addition, there is a growing local demand for sunflower oil for domestic use as well as demand for the by-product, to be used as seed cake for livestock feeding.

On the other hand, the production of palm oil has been gradually increasing over years, from 17,000 tonnes in 2010/11 to 42,000 tonnes in 2018/19 (Table 2). This was due to an increase in the area planted and harvested. Palm oil yield has remained constant and low at around 1.7 tonnes per ha. The production of palm is mainly in Kigoma, Pwani, and Mbeya. The 2019/2020 data shows oil palm production in Kigoma was 54%, Pwani accounted for 28%, and Mbeya produced 15%<sup>14</sup>.

## 3.2. Edible oils importation trends

Figure 1 shows the trends in quantities of imported edible oils for the period 2013-2021. On average, Tanzania imported approximately 463,000 tonnes of edible oils during the same period. The quantity of

Table 1. Sunflower production in Tanzania

	Financial year								
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area ('000' ha)	753.76	1,077.62	1,629.70	1,721.88	1,787.89	1,815.45	462.29	487.77	557.62
Production ('000' tonnes)	786.90	1,125.00	2,625.00	2,755.00	2,878.50	2,995.50	352.90	543.26	561.30
Yield (tonnes/ha)	1.04	1.04	1.61	1.60	1.61	1.65	0.76	1.11	1.01

<sup>10</sup> Olabisi, M, Tschirley, D, Nyange, D and Awokuse, T (2018), "The Challenge of Substituting Sunflower Oil for Imported Palm Oil: Evidence from Tanzania", Department of Agriculture Food and Resource Economics, Michigan State University. Accessed at <https://ageconsearch.umn.edu/record/275677/?ln=en>

<sup>11</sup> Zhihua Zeng, Douglas. 2017. The Sunflower Sector in Tanzania: A Great Potential for Industrial Competitiveness. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/27747> License: CC BY 3.0 IGO.; BFAP (2018) Prioritizing Policies for Driving Inclusive Ag Transformation: Tanzania Pilot Study Output 4: Value Chain Analysis: Identifying Public and Private Sector Investments Final draft, Mimeo

<sup>12</sup> The Sunflower Oil Processors Association said it is facing a shortage of 1.4 million tonnes to effectively meet the gap for edible oil in Tanzania (The East African, 2021 at <https://www.theeastafrican.co.ke/tea/business/tanzania-eyes-edible-oils-market-3649132#:~:text=The%20major%20crops%20for%20edible,for%20edible%20oil%20in%20Tanzania.>

<sup>13</sup> The International Trade Centre (ITC) (2016). United Republic of Tanzania Sunflower Sector Development Strategy 2016-2020, The International Trade Centre (ITC)

<sup>14</sup> Ministry of Agriculture, 2021

Table 2. Oil palm: area planted, production, and yield

	Financial year								
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area ('000' ha)	14.10	19.14	22.66	23.66	23.86	23.96	24.16	22.86	26.19
Production ('000' tonnes)	17.00	24.88	40.50	41.00	41.48	41.93	42.28	40.50	42.18
Yield (tonnes/ha)	1.2	1.3	1.8	1.7	1.7	1.8	1.8	1.8	1.6

Source: Ministry of Agriculture

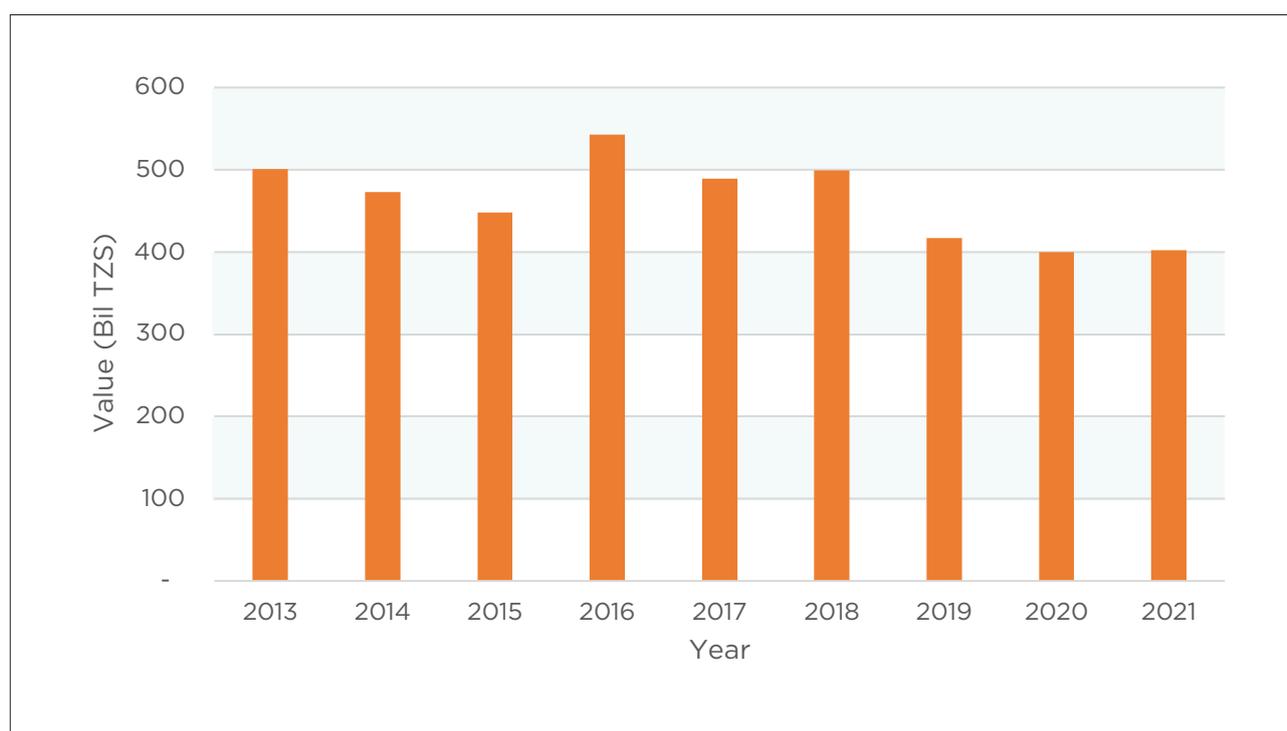


Figure 1: Total imported quantity (in '000' tonnes) of all edible oils in Tanzania

Source: Own construction using Tanzania Revenue Authority data

imported edible oils increased from 501,000 tonnes in 2013 to a peak of 542,000 tonnes in 2016 and decreased gradually to 402,000 tonnes in 2021. The average annual demand for edible oils in the country is approximately 570,000 tonnes. The difference between average imported edible oils (402,000 tonnes) and estimated domestic demand (570,000 tonnes) reflects the supply gap that is filled by local production.

Table 3 and Table 4 disaggregate the quantity and shares, respectively of imported edible oils by type as classified by the 4-digits HS codes<sup>15</sup>. Throughout the

<sup>15</sup> The Harmonised System (HS) Classification, also called the HS Nomenclature, is the World Customs Organization's Harmonized Commodity Description and Coding System. HS codes are composed of 6 digits and broken down into: Chapters (first 2 digits), Headings (first 4 digits) and Subheadings (full 6 digits).

years, palm oil and its fractions, refined or otherwise, but not chemically modified (4-digits HS Code 1511) dominated the share of imported oils. The absolute total quantities of palm oil fluctuated from 2013 to 2021 with a marginal decline from 2016 to 2021, save for 2018 when imports peaked at 411,000 tonnes. The share of imported palm oil has gradually increased over time. Specifically, while palm oil and its fraction constituted 60.7% of imported edible oils in 2013, its share increased to 92% in 2021. Fixed vegetable fats and oils and their fraction (HS-code 1515) constituted the second largest share of imports but declined from 24.7% in 2013 to 1.2% in 2021.

Table 3. Quantity (000 tonnes) of imported edible oils by type for the years 2013-2021.

HS4 codes	Description	Total imported Quantities of edible oil by Type and year ('000 tonnes)								
		2013	2014	2015	2016	2017	2018	2019	2020	2021
1511	palm oil	304	266	266	387	338	411	383	363	370.00
1515	fixed vegetable fats and oils	124	139	146	123	127	69	12	14	4.65
1513	coconut, palm kernel or babassu oil	30	3	4	2	1	1	1	1	1.12
1516	animal or vegetable fats and oils	19	6	2	7	3	1	1	0	1.25
1512	sunflower seed, safflower, or cottonseed	8	41	15	8	9	8	13	12	13.80
1517	margarine	7	8	10	11	6	6	6	6	6.07
1509	olive oil	4	4	1	1	0	1	0	0	0.36
1507	soya bean	3	4	2	4	4	2	1	4	4.32
Others		0	1	2	0	0	0	0	0	0.66
Total		501.02	472.88	447.85	542.42	489.06	499.44	416.87	400	402.24

Table 4. Percentage shares of imported edible oils by type for the years 2013-2021.

HS4 code	Description	2013	2014	2015	2016	2017	2018	2019	2020	2021
1511	palm oil	60.70	56.30	59.40	71.30	69.10	82.30	91.90	90.80	92.00
1515	fixed vegetable fats and oils	24.70	29.40	32.60	22.70	26.00	13.90	2.80	3.40	1.20
1513	coconut, palm kernel or babassu oil	5.90	0.60	0.90	0.30	0.10	0.10	0.10	0.20	0.30
1516	animal or vegetable fats and oils	3.80	1.30	0.40	1.20	0.70	0.10	0.10	0.10	0.30
1512	sunflower seed, safflower or cottonseed	1.50	8.60	3.40	1.40	1.80	1.60	3.20	3.00	3.40
1517	margarine	1.40	1.80	2.20	2.00	1.30	1.20	1.40	1.40	1.50
1509	olive oil	0.90	0.90	0.20	0.20	0.10	0.20	0.00	0.10	0.10
1507	soya bean	0.60	0.70	0.50	0.70	0.70	0.40	0.30	1.00	1.10
Others		0.20	0.30	0.40	0.20	0.10	0.10	0.00	0.00	0.20

Source: Own construction using Tanzania Revenue Authority data

### 3.3. Implications of import duty reforms on edible oils in Tanzania

In the fiscal year, 2018/19 the Government of Tanzania increased the import duty on crude and refined edible oils from 10 to 25% and from 25 to 35%, respectively (Figure 2).

The action was aimed at increasing the competitiveness and hence local market share of domestically produced/ refined edible oils, through increased relative prices of imported edible oils. An increase in import duty was anticipated to make imported oils relatively costly and hence discourage imports. On the other hand, this would provide a larger market share for the local producers of edible oils, hence stimulating increased domestic production and growth of the edible oils industry, predominantly the sunflower oils. The study assessed the effects of the reforms on the quantity imported, price of crude and refined edible oils, prices of palm oil and domestic production and found out the following:

#### Significant decline in the quantity of edible oils imported

The annual growth rates in the imported edible oils before and after-tax reforms are shown in Figure 3. Consistent with the expectations, there appears to be a significant decline (-17%) in the imported edible oils between 2018 and 2019, the exact year that the reforms

took place. The amounts of imported edible oils have consistently remained low. The correlation coefficient estimated between annual growth rates of imported oils and that of import duty is at negative 33.5%, confirming the average negative relation between the two variables.

#### Expensive crude oil and cheap refined oil

Of further interest was to explore whether the increased import duty had a uniformly negative impact on imported edible oils, whether crude or refined. The relevance of this comes from two major arguments.

On one hand, the crude and refined oils were subjected to different changes in import tax rates. While an increase of import duty on crude oil from 10 to 25% is equivalent to a 150% tax growth, the increase of import duty on refined oils from 25 to 35% is only equivalent to a 40% tax growth. Another argument for increased import duty was to control the common practice of refined edible oils being misclassified and imported as crude to attract a lower import tariff. This would result in a large markup potential for palm oil processors with minimal capital risk as the imported refined palm oil requires only repackaging<sup>16</sup>. The recent reforms therefore deliberately introduced a higher tax increase on crude oils compared to refined oils and narrowed the tax difference between the two from a 15% points

<sup>16</sup> Lengthy discussion on this is provided in the BFAP (2018), "Prioritizing Policies for Driving Inclusive Ag Transformation: Tanzania Pilot Study Output 4: Value Chain Analysis: Identifying Public and Private Sector Investments"

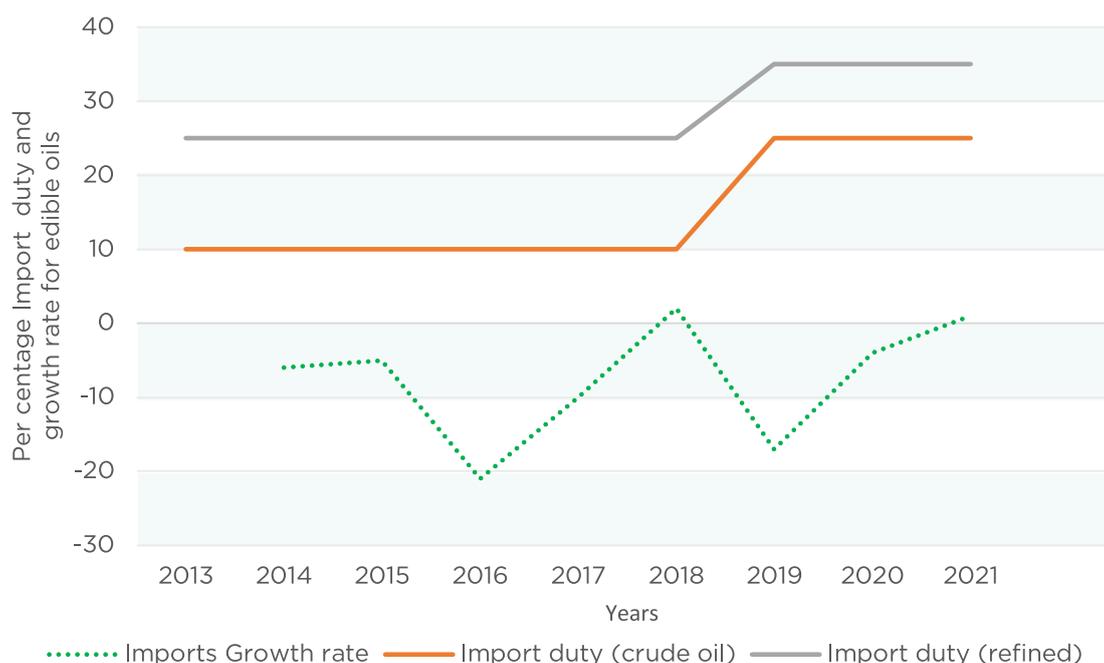


Figure 2: Percentage import duty and growth rate of edible oils between 2013-2021

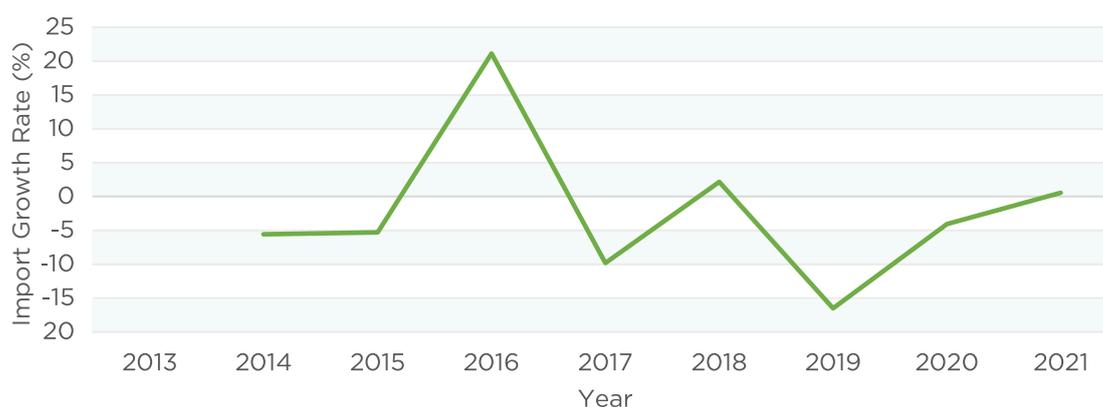


Figure 3: Import growth rates for edible oils

Source: Own construction using Tanzania Revenue Authority data

difference (10 versus 25%) to a 10% points difference (25 versus 35%). One would therefore not anticipate a uniform change between the two products.

The changes in imported edible oils between crude and refined sunflower and palm oils following the import duty reforms are shown in Table 5. Indeed, consistent with the expectations, while the tax increase lowered the amount of imported crude oils, the impact was the opposite for the refined edible oils (increased imports). Specifically, while an increase in import duty lowered the average imported quantity of crude palm oil by 98%, it resulted in an increase in the importation of refined palm oil by 459% within the same period. Similarly, while the imported crude sunflower declined by 93%, that of refined sunflower increased by 347%. The tax reform made crude oil relatively expensive and refined oil relatively cheaper resulting in a within-

product substitution accompanied by the switch from importing crude oil to refined oil. In addition, the reform may have successfully addressed the potential challenge of some companies to strategically misreport imported refined oil as crude oils.

#### Effect on the price of palm oil

The tax increase did not translate to the final retail price increase for the refined palm oils in the country. As Figure 4 and Figure 5 show, despite the increase in the import duty for refined oils, the final retail prices for the two oils only marginally increased. While this is by itself a puzzling outcome (given the price elasticities of the two edible oils), it is unlikely to allow the realization of the objective of altering the relative oil prices and hence increase domestic production of sunflower oil in Tanzania.

Table 5. Total imported edible oils before & after-tax reforms, oil status (crude vs refined oils).

Item	Period	Import duty Rate (%)	Average import quantity (MT)	Growth rate (%)
Crude palm oil	2012/13-2015/16	0	196,700,000	
	2018/19-2020/21	25	3,620,000	-98
Refined palm oil	2012/13-2015/16	25	9,220,000	
	2016/17-2017/18	25	39,700,000	
	2018/19-2020/21	35	221,800,000	459
Crude sunflower oil	2012/13-2017/18	10	4,313,000	
	2018/19-2020/21	25	311,000	-93
Refined sunflower oil	2012/13-2017/18	25	2,564,000	
	2018/19-2020/21	35	11,451,000	347

Source: Own construction using Tanzania Revenue Authority data



Figure 4: Refined sunflower and palm oils average annual prices (TZS/litre)



Figure 5: Percentage of annual price changes before and after the 2018/19 fiscal reform

Source: Own construction using the Ministry of Agriculture data

### Domestic production of edible oils

Another fundamental question is whether the increases in the import duties translated into increased domestic production of edible oils, mainly sunflower oil. Contrary to the expectation, consultations with key players in the sunflower industry, both directly and through their umbrella organization, the Tanzania Sunflower Processors Association (TASUPA), suggest that the production of sunflower oils has declined in Tanzania since the fiscal reforms. This, therefore, implies that the fiscal reforms that aimed to promote local production did not realize their targets.

The producers further indicated several non-fiscal factors such as lack of sufficient sunflower seeds that may have accounted for this unintended outcome. They include lack of industrial inputs and limited use of modern agricultural inputs including seeds, fertilizer, and extension services by the small-scale producers. Consequently, most of the refinery and double refinery plants (whether small, medium, or large) operate at less than 50% of their installed production capacity.

### 3.4. Edible oils exports: Trends in quantity and value

Tanzania experienced a significant shift in its exports of edible oils before and after 2015 as shown in Figure 6. For example, annual exports of edible oils increased from 46,000 tonnes in 2012 to 168,000 tonnes in 2015, a 265% increase. The oil exports fell drastically to 29,000 tonnes in 2016, an 827% decline and continued to sharply decrease to only 9,000 tonnes in 2021. This pattern is coincidental to that of decreased imports of edible oils presented in Figure 6, suggesting two possibilities. First is the fact that decreased imports widened the demand-supply gap for edible oils in the country that had to be filled up by domestic production at the expense of exports. Second, this supports the premise that due to the challenges of accessing industrial inputs (sunflower oil seeds), the domestic industry could not increase their annual production to take the advantage of increased import tariffs on edible oils while maintaining or even increasing their level of exports.

Indeed, Figure 7 shows that while sunflower has been the leading source of edible oil exports in the country throughout the years, its share of total exports has gradually declined since 2016. The decline is notable between 2015 and 2016 - a fall from 95% of total edible oils export shares to 55%, but also pronounced between 2018 and 2019 when the tax reforms were introduced, a fall from 56 to 30%. This confirms the possibility that while increased tax made the sunflower industry

domestically competitive, the raw materials availability challenges did not bolster increased production by the processing plants. As a result, there was a reduction in exports to meet increased domestic demand for locally processed edible oils. Similar trends are observed in the exported palm oils in the country<sup>17</sup>.

### 3.5. Tax revenue collections from imported edible oils

One obvious effect of any fiscal reform rests on the total tax revenue to be collected by the government. Understanding the status of various tax revenues collected from imported edible oils can shed some light on the potential implications of any such reforms. Figure 8 summarizes tax revenues collected at the point of entry from imported edible oils, by tax type and year. Generally, there has been a gradual increase in the tax revenue collected from imported edible oils over time, growing from TZS 99 billion in 2012 to TZS 291 billion in 2021, a 194% increase. The VAT constituted the largest share of tax revenues before the import duty reform between 2012 and 2018, followed by import duty. The trend, however, reversed from 2019 onward following the increased import duties on edible oils, with tax revenue from import duty constituting the largest share of collected tax revenue followed by VAT.

Consistent with the import shares, the largest contribution of tax revenue from imported edible oils is palm oil as shown in Figures 9 and 10. The share of tax revenue from imported sunflower has remained modest throughout the period.

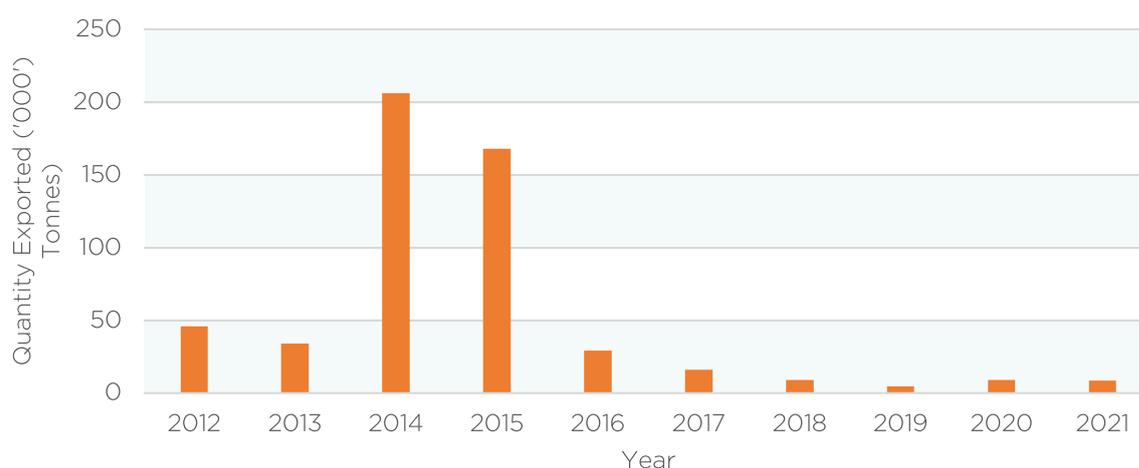
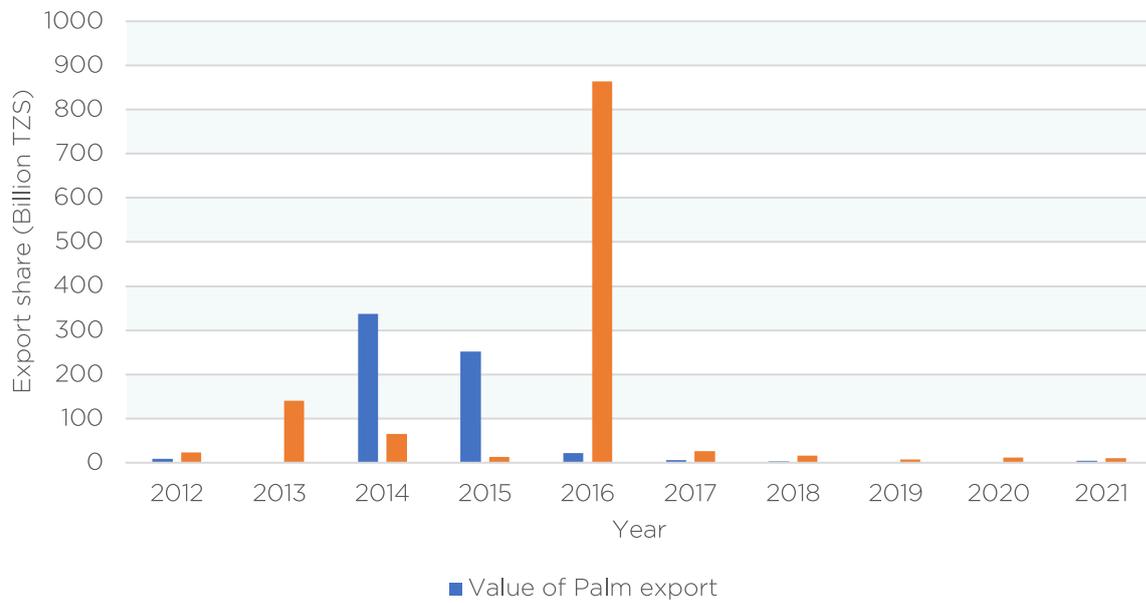


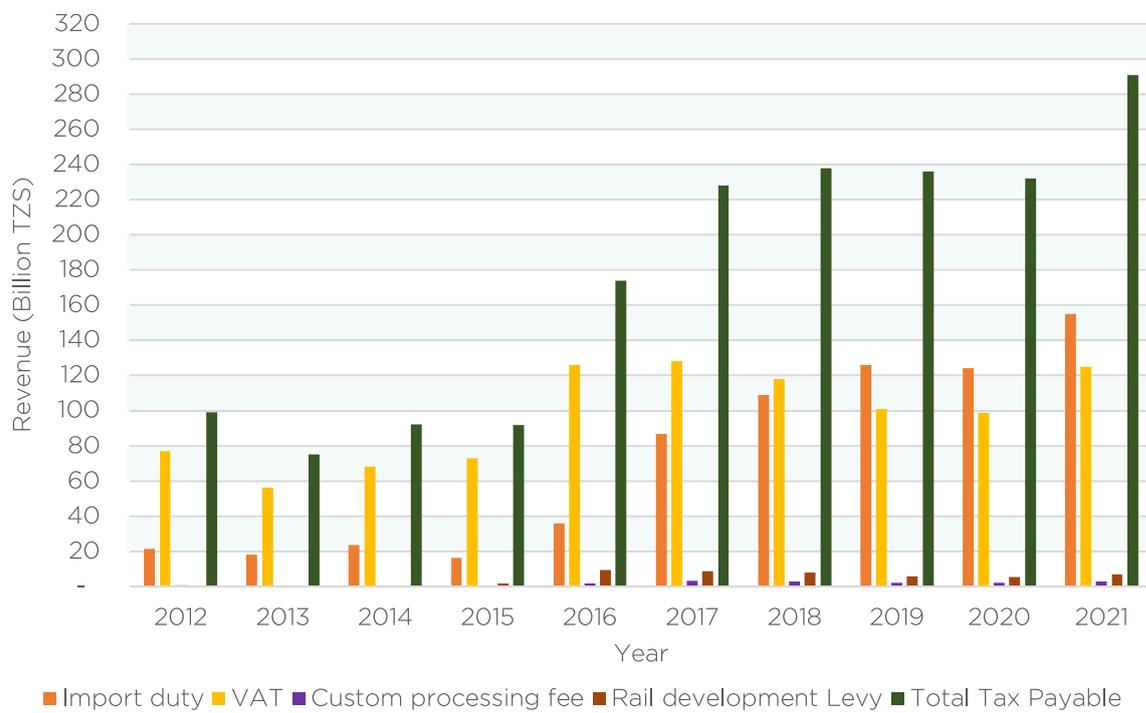
Figure 6: Total quantity ('000' tonnes) of exported edible oils from Tanzania by year

Source: Own construction using Tanzania Revenue Authority data

<sup>17</sup> Some edible oils processors have often imported crude palm oils and exported part of the refined palm oils to international markets, largely within the region.



**Figure 7: Dynamics of edible oils exports share for palm and sunflower in Tanzania**  
 Source: Own construction using Tanzania Revenue Authority data



**Figure 8: Tax revenues collected ('000' TZS) at entry from imported edible oils, tax type, and by year**  
 Source: Own construction using Tanzania Revenue Authority data

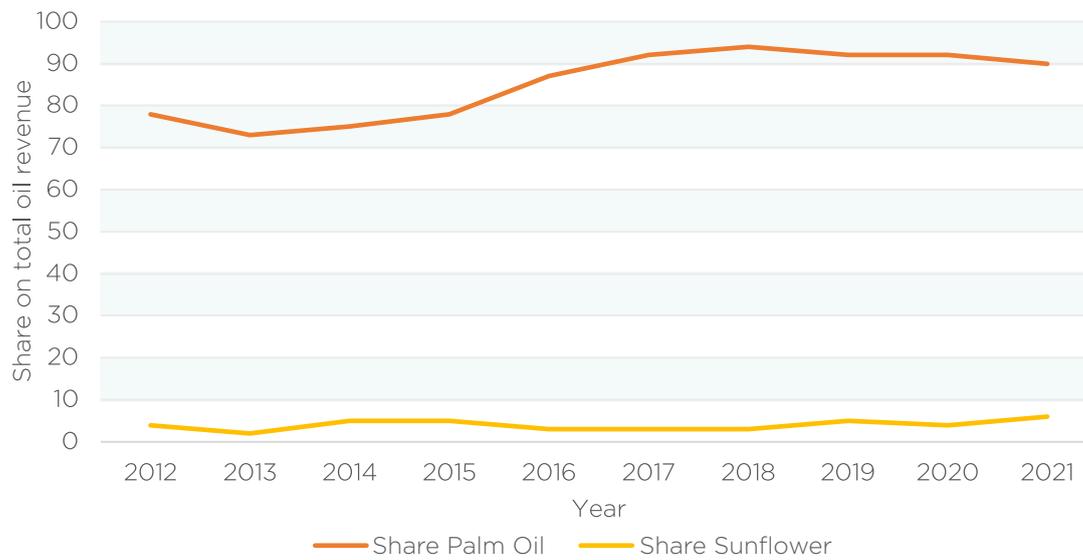


Figure 9: Percentage contribution of palm oil and sunflower on total oil tax revenue from imported edible oils, by year

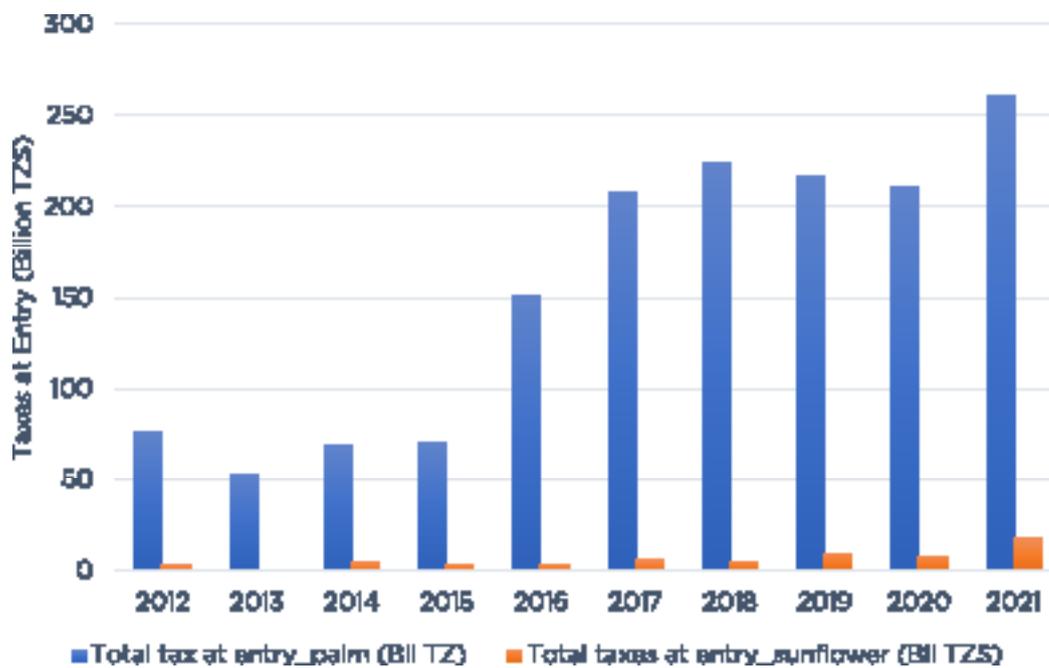


Figure 10: Tax revenue (TZS) from imported palm oil and sunflower  
Source: Own construction using Tanzania Revenue Authority data

# 4 Findings - Analytical results

## 4.1 Fiscal measures

### 4.1.1 Scenario 1a: Partial reduction of import duty on the imported palm and sunflower oils only

It is observed that the increase in import duty rates in different regimes did not have a significant effect on the amount of edible oils imported. This is explained by the domestic production constraints, especially at the primary stage of oil seeds production. Changes in import duty rates, however, affected the relative amounts of crude and refined oil imported. Before the changes in import duty rates in 2018, when crude, palm and sunflower oils were charged 10% and refined oil was charged 25%, the proportion of imported crude, palm and sunflower oils was over 80% of the total amount of imported sunflower and palm oils, and refined oil comprised less than 20% as shown under regime 2 in Table 6. Increasing import duty rates for imported palm and sunflower oils to 25% and refined oil to 35% shifted the proportion of imported crude palm and sunflower oil to about 6% and refined oil to about 94% of the total amount of imported sunflower and palm oils as shown under regime 3 in Table 6.

In analysing the effects of the reduction of import duty on the imported palm and sunflower oils to 10% for crude oil and 25% for refined oil (regime 2), the

study considered this reversal effects on the imports of crude and refined oil. The study, therefore, projected that reversing the import duty rates would reverse the proportions of crude and refined palm and sunflower oils from the current status (regime 3) to similar proportions during the previous regime (regime 2) as shown in Figures 11 and 12.

These regime changes imply that more crude oil, which has lower customs value compared to refined oil and fetches low import duty, will be imported compared to refined oil which has higher (customs) value and is charged higher import duty. This in turn implies a loss of government revenue collection from the potential import duty and VAT because of the importation of more crude oil, which is lower in value relative to refined oil and has a lower import duty rate, and loss of VAT as shown in Figure 13.

Reducing import duty will lower the relative price of imported edible oil to domestically produced edible oil. Lowering the import duty rate may reverse the earlier import substitution, but this might not be significant, because even with high rates of import, imported palm and sunflower oils were cheaper compared to domestically produced. So, due to these offsetting effects, any effect on employment due to import duty changes will not be significant.

Table 6. Proportions of crude and refined palm and sunflower oils imported under different import duty regimes.

	Import duty regimes (%)			Proportions of imported palm and sunflower oils (%)		
	Regime 1 2012-2016	Regime 2 2016-2018	Regime 3 2018-	Regime 1	Regime 2	Regime 3
Crude palm oil	0	10	25	92	79.8	1.0
Refined palm oil	25	25	35	4.8	16.2	94.0
Crude sunflower oil	10	10	25	2.8	0.9	0.1
Refined sunflower oil	25	25	35	0.4	3.1	4.9

Source: Tanzania Revenue Authority

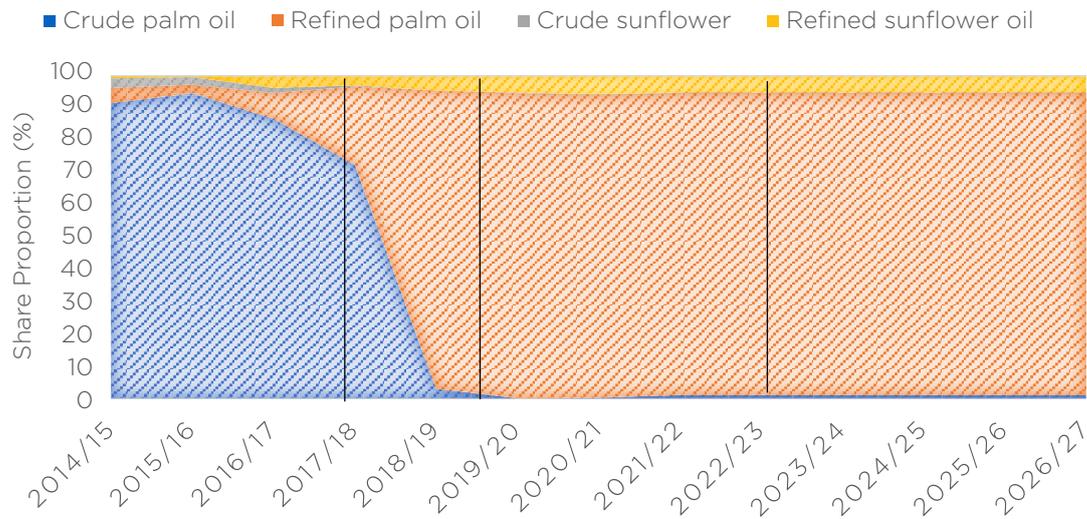


Figure 11: Projections of shares of crude and refined palm and sunflower oils imported before import duty changes

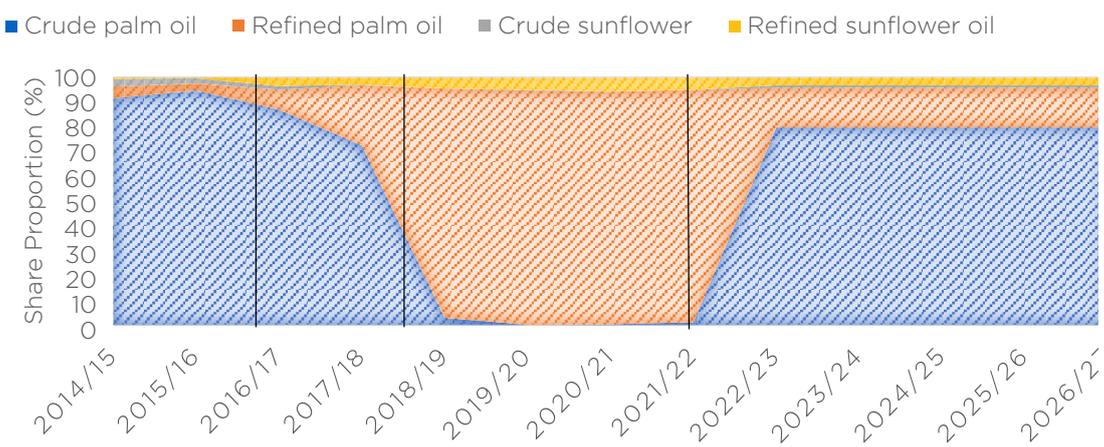


Figure 12: Projections of shares of crude and refined palm and sunflower oils imported after import duty changes

Source: Own construction using Tanzania Revenue Authority data



Figure 13: Projected revenue collection from import duty and VAT after reduction in import duty

The switch to the importation of more crude oil compared to refined oil after the import duty changes implies an increase in the processing stage which creates more employment. However, a previous study has shown that the previous switch from the importation of crude oil to more refined oil did not result in significant job losses, but rather redeployment of workers to other parts of the business. Though there are also claims that most of the imported palm oil previously declared as crude was already refined.

On the other hand, a reduction in import duty will reduce the domestic price of edible oil in Tanzania. Consumers will then be able to purchase edible oil at a lower price, which lowers their cost of consumption, and raises their purchasing power commensurate to increased real income, translating to an increase in the quantities consumed. This will increase consumer surplus which is equivalent to improving the welfare of consumers. The reduction of the import duty rate by 10%, assuming a pass-through rate of 70%, implies that the domestic price of the main edible oils will go down by 7%. The weighted current price of refined edible oil is TZS 5,500 per Kg. Therefore, a 7% reduction implies a price reduction by TZS 385 per Kg. With the current importation estimated at 365,000 tonnes, the consumer surplus gained will be at least about TZS 140 billion. This value of consumer surplus outweighs the TZS 139 billion loss in import duty in the first year after import duty reduction. What this implies is that if suppliers of edible oils lower the domestic prices by at least 70% of import duty reduction, the consumer surplus will outweigh the government revenue loss.

Reduction of import duty is also important due to soaring CIF prices of edible oils (and many other products) following the COVID-19 pandemic that hit the world in December 2019 and is currently propelled by the invasion of Ukraine by Russia. Reduction of import duty especially on goods that have suffered high levels of inflation such as edible oils will be a tool to reduce "imported inflation".

#### **4.1.2 Scenario 1b: Complete removal of import duty on the imported palm and sunflower oils**

This scenario looks at the complete removal of import duty on the imported palm and sunflower oils. The previous trends following fiscal changes on import duties provide a sense of direction of change in import volumes. Import duty seems to have little import substitution effect due to domestic production

constraints. Trends also show that as the difference between import duty for crude and refined oil decreases, the quantity of imported refined oils increases relative to crude oil. Therefore, the complete removal of import duty from both crude and refined oils will mimic the current import duty status (regime 3) relative to regime 2. And because the complete removal brings the crude and refined oil import duty at par, the proportion of refined oil will increase even further as compared to the current status. Figure 14 shows the projected proportion of both crude and refined palm and sunflower oils imported, before and after complete import duty removal.

The complete removal of import duty implies a loss of government revenue. All the potential amount that was to be collected from the importation of palm and sunflower oils will be lost as shown in Figure 15. This makes it an unlikely option for the Ministry of Finance and Planning. Further, complete removal of import duty will be against the common tariff rates under the East African Community Customs Union. With a weak ability to implement rules of origin, this might impact other East African countries, since they might import edible oil from Tanzania, which was imported into Tanzania at a zero rate.

#### **4.1.3 Scenario 2: Removal of VAT on locally refined sunflower oil**

This scenario projects the effects of zero-rating VAT on locally produced crude and refined sunflower oils on government revenue and employment. Results for the two states are presented with the current level of VAT (18%) and with VAT zero-rating for 3 years from 2022/23 to 2024/25. Results for a short period before the intervention, during the intervention, and a short period after the intervention which covers a span of 8 years from 2020/21 to 2026/27 are presented. This is to allow for trend analysis. Figure 16 presents the amount of crude and refined sunflower oil produced with and without VAT zero-rating for the period covered.

Zero-rating VAT on crude and refined sunflower oil from domestically produced sunflower oil seeds will lower the price of sunflower oil. Lowering VAT by 12% will make locally produced sunflower oil more competitive relative to imported sunflower oil. Therefore, at the current VAT rate of 18%, zero-rating crude, and refined sunflower oils, will make it even more competitive. This implies that consumption of sunflower oil produced domestically will increase, substituting palm oil and imported edible oils. The increase in demand will

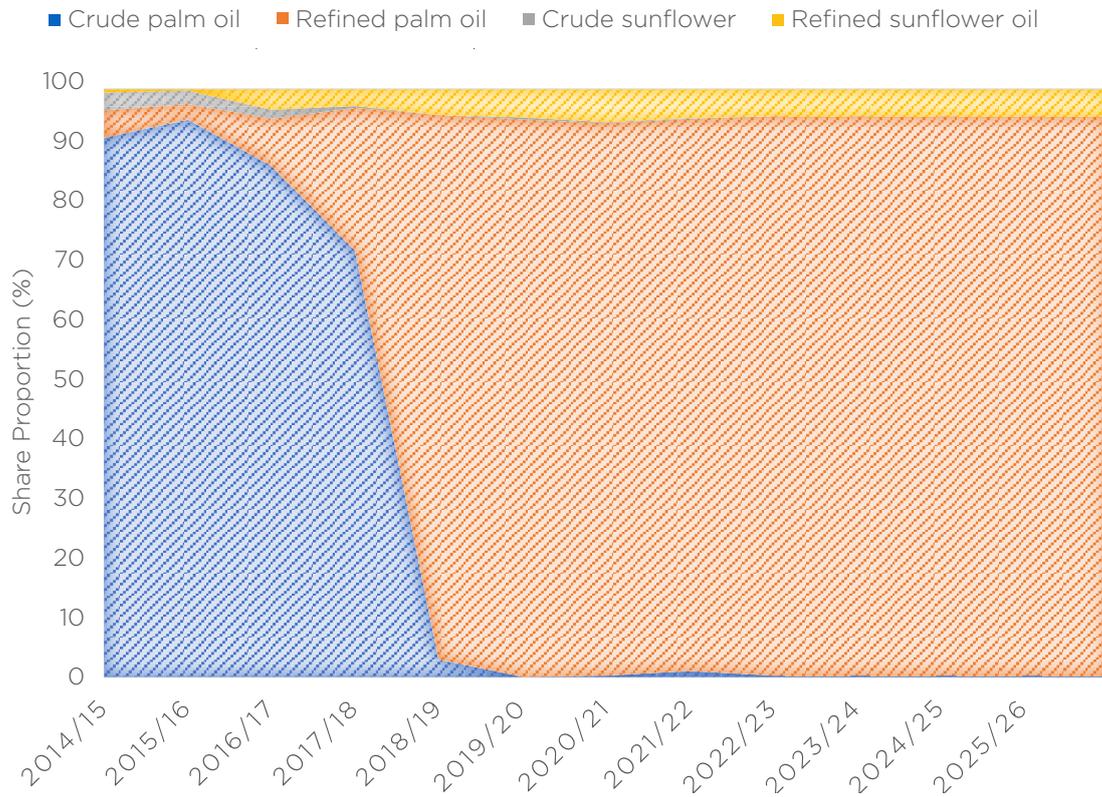


Figure 14: Projections of shares of crude and refined palm and sunflower oils imported before and after import duty removal

Source: Own construction using Tanzania Revenue Authority data

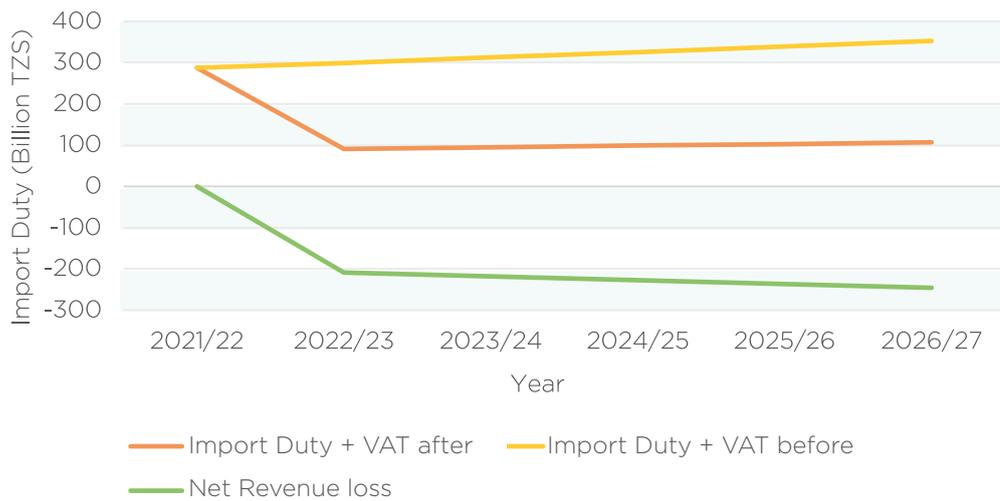


Figure 15: Projected revenue collection from import duty and VAT after complete removal of import duty

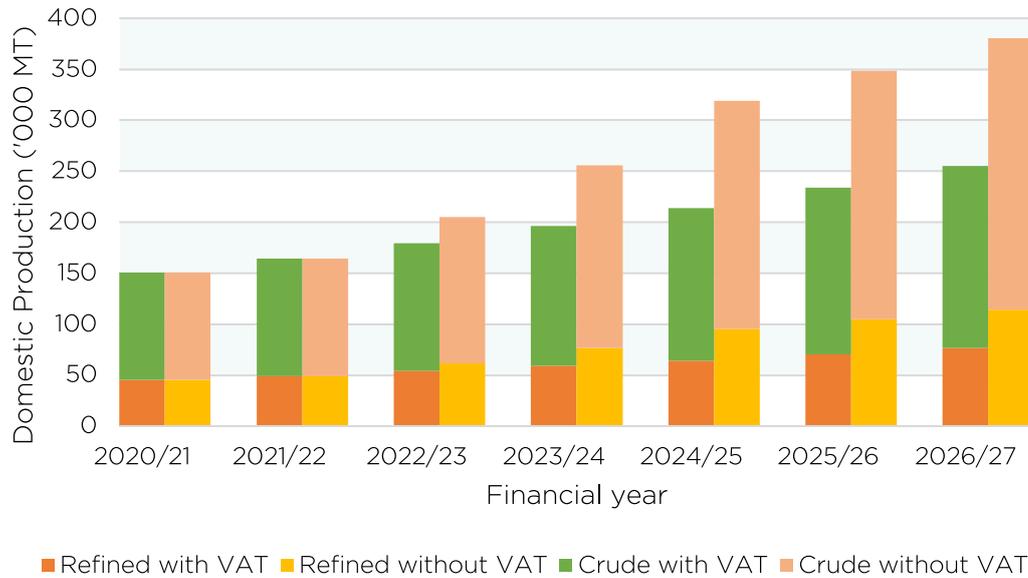


Figure 16: Domestic production of crude and refined oils under the current scenario and with zero-rated VAT  
 Source: Own construction using Tanzania Revenue Authority data

stimulate more domestic production and supply of sunflower oil seeds, and crude and refined sunflower oil. During the period when VAT is zero-rated, there will be a sharp increase in domestic production from 49,000 to 96,000 tonnes (compared to 64,000 tonnes with a normal trajectory) for refined oil, and from 115,000 to 223,000 tonnes (compared to 150,000 tonnes with a normal trajectory) for crude oil at the end of the intervention period of 3 years. These represent

a doubling of production of both crude and refined sunflower oil after the 3 years, or equivalent to a growth of 26% every year. After the intervention, the rate of growth will return to normal (about 5%) but at a higher level of production.

Removing VAT, however, does not come cheap. It results in revenue loss due to loss of VAT income, corporate tax, and PAYE resulting from lower production of edible

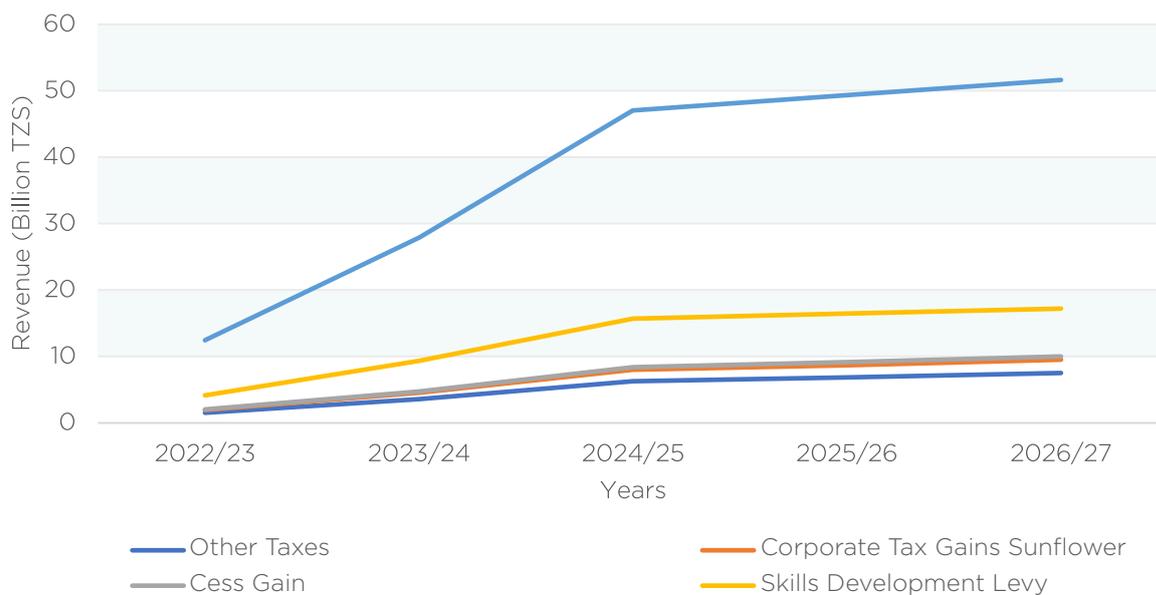


Figure 17: Gains in government revenue after VAT removal

oils from other substitute oil seeds (palm, cotton, and sesame). Similarly, import substitution means loss of potential import duty and corporate tax from importers. On the other hand, the government earns more revenue from corporate tax, PAYE, and skills development levy from the sunflower oil production industries. The government will also be able to collect more revenue through cess collected from additional domestic production of sunflower oil seed.

Results presented in Figure 17 and Figure 18 indicate that there will be negative net government revenue collection once VAT is removed for the first 2 years compared to the situation with VAT. The government gets a net loss of TZS 20.47 billion, TZS 19.70 billion, and TZS 18.95 billion during the first, second, and third years respectively, after VAT removal. When VAT is returned, after the third year, and when the industry operates at a higher level of production, positive net gains will continue, estimated to be TZS 23.05 billion and TZS 23.98 billion in the fourth and fifth year, respectively compared to the situation without VAT removal. This implies that while in the short term the government will experience a decrease in expected net revenue, the mid-and long-term effects will be

characterized by an increase in expected net revenues compared to the situation without any intervention.

Further, there will be gains and losses in terms of employment (Figure 19). While the sunflower sector will experience an increase in employment along the whole value chain, other edible oils will lose employment along their value chains. It is estimated that the sunflower sector will generate 743,000 jobs in 3 years after zero-rating VAT. About 90% of them are estimated to be in agricultural production of sunflower oil seed and about 10% in other stages of the values chain development such as transportation, processing, distribution, and marketing. Other edible oils will however lose about 89,000 jobs due to less than projected production because of substitution for sunflower. The net change in employment after 3 years of VAT removal is the increase in the number of people employed by 654,000. This positive net increase is realized because most of the substitution is expected to come from imports of edible oils thus creating more domestic employment.

In addition, farmers, and small and medium enterprises (SMEs) owners will gain more income from the expanded production of sunflowers (Figure 20).

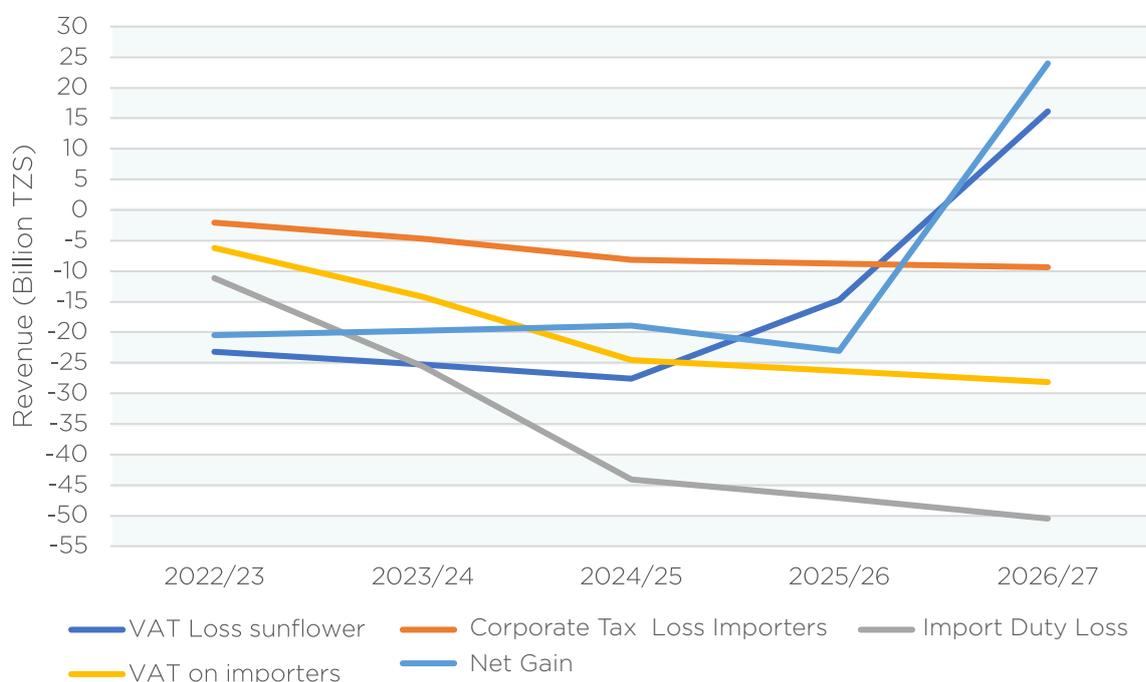


Figure 18: Losses on the government after VAT removal

Source: Own construction using Tanzania Revenue Authority data

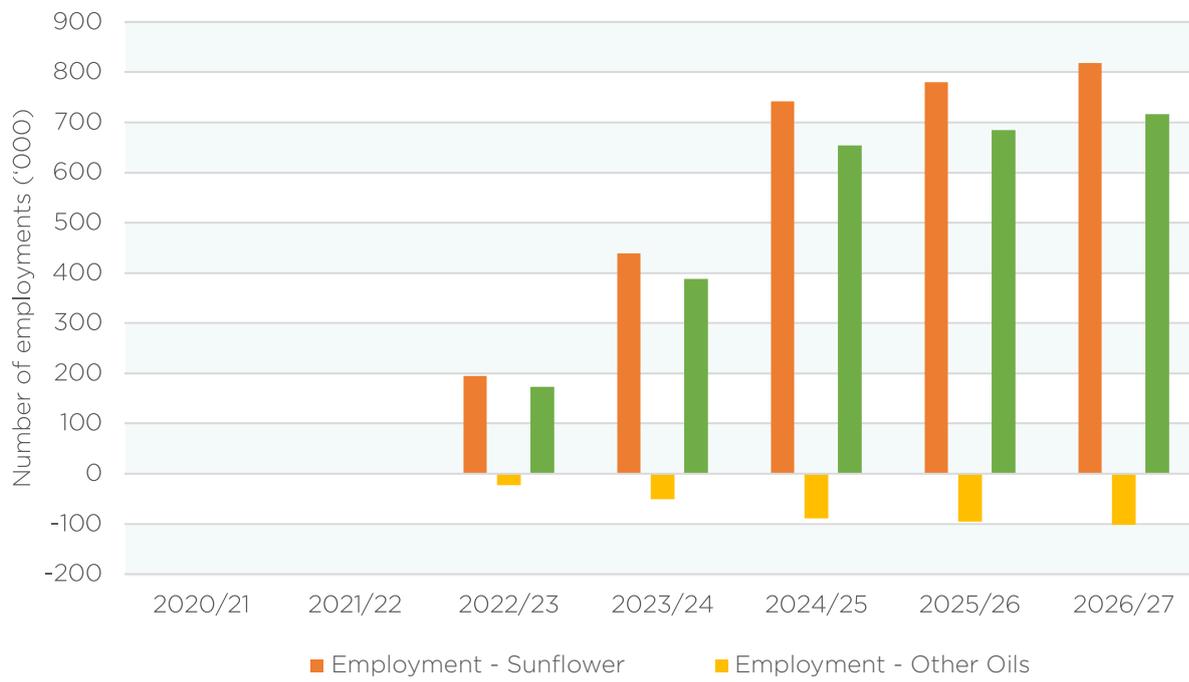


Figure 19: Gains and losses on employment after VAT removal

Source: Own construction using Tanzania Revenue Authority data

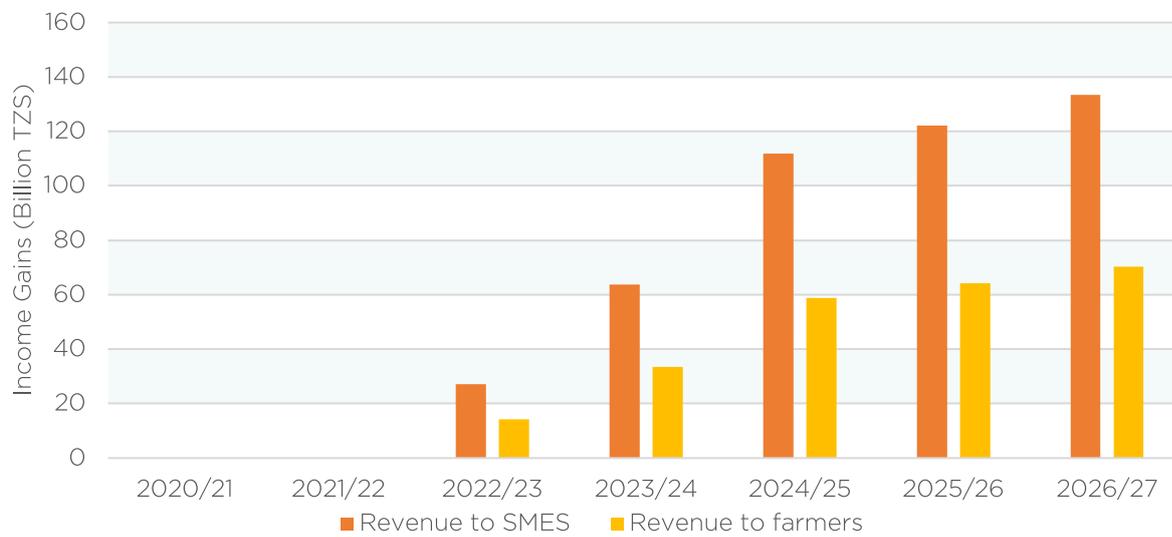


Figure 20: Income gains by farmers and SME owners

Source: Own construction using Tanzania Revenue Authority data

By 2024/25, farmers will have earned TZS 59 billion more and SME owners will have earned TZS 112 billion.

Production constraints may however limit the possibility of taking advantage of the lower price of domestic sunflower oil. In that case, the potential gains may not be fully realized. These gains are possible if farmers will respond by increasing production in terms of cultivated area and productivity by adopting recommended agronomic practices such as using hybrid seeds, and fertilizers and adhering to good postharvest handling.

#### 4.1.4 Scenario 3: Reduction of import duty on palm oil and removal of VAT on locally refined sunflower oil

This scenario combines the two previous scenarios, the removal of import duty and VAT. It also covers a period of fiscal change implemented over 3 years. See Figure 21 and Figure 22 for revenue collection implications on the government.

Considering the reduction of import duty (to 10% for crude edible oil and 25% for refined edible oil) and removal of VAT, this intervention will reduce the domestic price of edible oil in Tanzania. Consumers

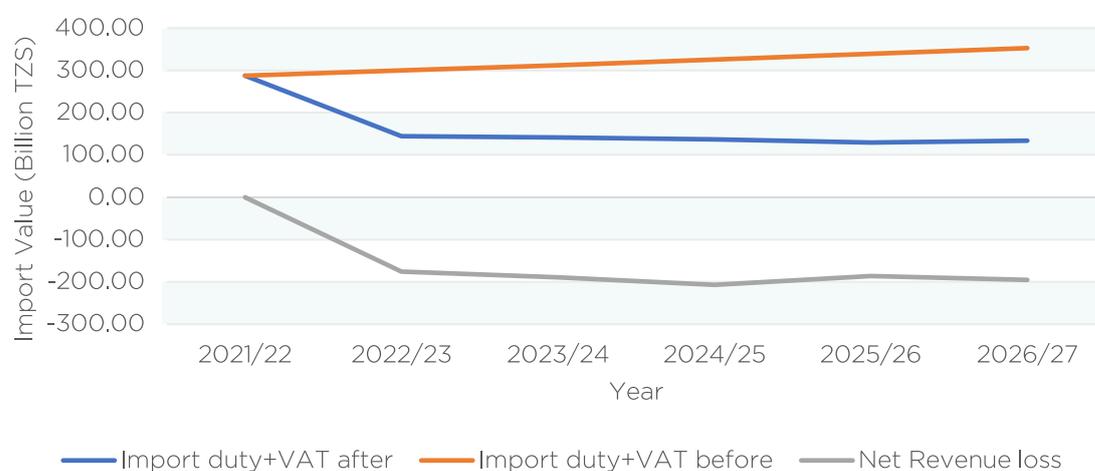


Figure 21: Revenue effect after removal of VAT and partial reduction of import duty

Source: Own construction using Tanzania Revenue Authority data



Figure 22: Revenue effect after removal of VAT and import duty

Source: Own construction using Tanzania Revenue Authority data

will then be able to purchase at a lower price and may even increase the quantity of edible oils consumed. This will increase consumer surplus/welfare. The consumer surplus will outweigh the government losses in the first year of the intervention (TZS 175.5 billion) if the pass-through rate is at least 72%. The reduction of the import duty rate by 10%, assuming a pass-through rate of 72%, implies that the domestic consumer price of the main edible oils decreases by 7.2%. With a weighted current price of refined edible oil of TZS 5,500 per Kg, a 7.2% reduction implies a price reduction by TZS 396 per Kg. With the current importation estimated at 365,000 tonnes, the consumer surplus gained will be about TZS 144.5 billion. Domestic annual production of sunflower oil is about 180,000 of which, it is estimated that about 70% (126,000 tonnes) is crude and 30% (54,000 tonnes) is refined. It is assumed that both 10% of crude sunflower oil (12,600 tonnes) and 50% of refined sunflower oil (27,000 tonnes) are traded under the VAT system. If VAT is zero-rated and the pass-through rate is 72%, then the price will be reduced by 13%. For TZS 5,500 for crude sunflower oil and TZS 6,500 for refined, then the consumer surplus will be about TZS 31.7 billion. Therefore, the total consumer price from lower import duty and zero-rated VAT will be TZS 176.2. What this implies is that if suppliers of edible oils were to lower the domestic prices of edible oil by at least 72% of import duty and VAT reduction the more the consumer surplus will outweigh the government revenue collection loss and the net welfare will be positive.

However, as argued earlier, the reduction in VAT is only feasible if production responds to the incentive. Current production constraints make it unlikely for producers to respond immediately. This was evidenced by the previous intervention to increase production by increasing

import duties on edible oils that did not materialize domestically. It is therefore recommended that the intervention be implemented in a phased approach, starting with the reduction of import duty which has a potential direct effect on consumer welfare followed by zero-rating of VAT after addressing production constraints.

## 4.2. Non-fiscal measures

The fiscal reforms that were implemented in previous years were intended to discourage importation and encourage domestic production of sunflower, palm oil, and other oil crops. However, domestic production was not responsive to the reforms even though Tanzania has diverse agroecological zones that are suitable for the production of edible oilseed crops. Several issues were behind this unresponsiveness including unavailability and high prices of improved seeds, poor agronomic practices, limited financial support, and land competition with maize. Stiff competition from imported crude and refined palm oil has also undermined the domestic production of sunflower and other oilseed crops. Tanzania has the largest area under sunflower production in Africa but with less output/ha (low productivity), whereas a country like South Africa produces more with less area under cultivation. In 2020/2021 Tanzania had a yield of around 1 tonne/ha, while the world average was 2 tonnes/ha for sunflower; and an average yield of 1.7 tonnes/ha of oil palm compared to the global average yield of 3.5 tonnes/ha.

Regarding production challenges in Tanzania, a representative of the Tanzania Sunflower Processors Associations had the following sentiment (Box 1).

### Box 1: Production challenges of edible oils in Tanzania

“There is high demand for sunflower oil not only in the domestic market (570,000 tonnes per annum) but also in neighbouring countries such as the Democratic Republic of Congo (DRC) where demand is estimated at 999,000 tonnes. However, Tanzania is unable to sell to DRC due to existing high costs of production. One challenge is that both small-scale farmers and processors have several other income-generating activities and thus put less effort into farming. Another challenge is that there is an over-reliance on rain-fed agriculture, which is prone to drought, and in some places, farmers produce for one season instead of capitalizing on two seasons a year. Sunflower is highly prone to pests such as rodents and birds and large-scale investors shy away from farming due to red tapes in accessing village land and petty theft problems. This is not to downplay the effects of poor agronomic practices – missing improved high yielding seed, timely planting, right manure, line spacing, etc.’

Moreover, farmers fail to respond to fiscal incentives to increase production due to low prices and small profit margins compared to other players due to their price-taking position in the value chain, among other reasons. Currently, farmers sell sunflower oil seeds at between TZS 700 and 1,300 per kilogram, but a litre of refined sunflower oil that uses about 3 kilograms of sunflower oil seed sells at TZS 6,500. While the price range is wide, a large proportion of farmers' sunflower oil seeds are sold at the lowest price point at harvest due to the immediate need for cash and the lack of warehouses for storage. When comparing the profit margin per tonne of sunflower oil, a farmer gets around TZS 146,000 as profit whereas an SME processor gets TZS 583,000 and a commercial processor gets about TZS 1.8 million (BFAP, 2018).

Again, about 3 tonnes of sunflower oil seeds will be required to produce one tonne of refined sunflower oil. With a yield of about one tonne per hectare, it will require 3 hectares to produce enough sunflower oil seed to produce a tonne of refined oil. Therefore, a profit margin of TZS 146,000 per tonne of refined sunflower oil is equivalent to a profit margin of TZS 48,300 per hectare of sunflower. This largely discourages farmers to expand production and instead invest in improving their productivity. It also implies that high productivity is fundamental in unlocking increased gross margin per hectare for the farmers.

To overcome the supply challenge and stimulate production, some processors have engaged in contract farming through the provision of farm inputs and training farmers on good agronomic practices. The challenge however remains on how to operationalize and make contract farming binding to the involved parties. Most farmers claim to be offered very low prices by contracting processors which do not reflect the market price. On the other hand, some farmers may also default the contract and sell their oil seeds to other middlemen when prices are higher than contractual prices.

The study showed that most processors strive to meet local demand for sunflower oil. However, processors lack raw materials. About 60% of locally produced sunflower is processed by SMEs. In addition, local seeds have low oil content (about 35%), while oil hybrids have over 45%.

Stimulating the production of sunflower and palm oil may be a solution for processors to reach full capacity production in their respective factories since fiscal measures alone have not been able to enhance production in Tanzania. Despite the existing supportive initiatives (see Box 2), sunflower production in Tanzania is still low and sluggish.

This study, therefore, proposes the following non-fiscal measures to be instituted alongside fiscal incentives to spur the growth of the edible oils sub-sector in Tanzania.

- (i) Unlock production constraints
  - a. Enhance adoption of recommended agronomic practice: The government should empower extension officers to train farmers on good agricultural practices. These efforts should go hand in hand with promoting irrigation and ensuring the availability of high-yielding and high oil content seeds. Intercropping should be discouraged among small-scale farmers and instead mixed farming with beekeeping promoted. Beekeeping would be beneficial for the crops since it facilitates pollination and increases yield.
  - b. Encourage commercial farming and reduce bureaucracies: Regional and local government authorities can set aside land for commercial farming and avoid bureaucratic processes in accessing village land for commercial farming. At the current yield levels and with only one growing season, to produce 400,000 tonnes of sunflower oil which is enough to cover the domestic deficit, 1.2 million ha of land will be required. With proper irrigation that can allow for two growing seasons, this land requirement will be cut down to 600,000 ha. Given the huge potential to involve youth and medium-scale farmers in agriculture who do not have very high capital, block farming and medium-scale production will be an ideal strategy. Block farming will make it easier to provide support services and ensure that production is done commercially. There is also a need to curb the high rate of crop theft during the harvesting window and deliberate efforts are needed to cut the existence of very powerful middlemen/traders who exploit smallholder farmers. One option to curb the middlemen is the introduction of a vibrant warehouse receipt system.

- c. **Promote contract farming:** Local governments should put in place by-laws and incentives to promote contract farming. There is a need to create awareness among farmers on the importance of contract farming and ultimately honour the contracts to create a 'win-win' environment. Contracts should also be used as a mechanism to hedge farmers and processors against price risk and ensure a good price to farmers and at the same time a fair cost to buyers.
  - (ii) Unlock quality constraints
    - a. **Enforce standards and measures (weighing scales):** The government should enforce standards and measures while avoiding informal operations. This will help boost the margins of the poor smallholder farmers.
    - b. **Awareness campaigns** on the difference between crude and (double) refined edible oils and associated health effects are important. Product awareness will lead to the acceptance of price differentiation. Currently, the prices of the two are almost the same in the market.

## Box 2: Existing support initiatives

1. **Seed quality:** Several public seed agencies are involved in seed research and multiplication. Ilonga Agricultural Research Institute maintains the originality of the record open-pollinated variety (OPV) as many other research centres face funding challenges. In early 2022, following the shortage of sunflower seeds, the government distributed standard sunflower seeds at a subsidized price to increase production. Anecdotal evidence from field interviews shows that this led to an increase in areas planted with sunflower in that season.
2. **Value chain enhancement:** There are many opportunities for enhancing the sunflower value chain from the producer to the final consumer. Some development agencies – such as the Agricultural Market Development Trust and Farm Africa – have initiated investments in developing the sunflower value chain.
3. **Fertilizer:** Both private and public companies such as Yara, Minjingu Mine, and Fertilizer Company Limited recommend suitable fertilizers for sunflower and the establishment of supply chains to increase access by farmers.
4. **Access to market:** Support from the private sector and development partners facilitate access to market information. These include mobile phone companies such as Tigo Kilimo and donor-funded projects like Mviwata Agricultural Marketing Information System which help farmers to access market information for their products. Other initiatives are the SAGCOT Integrated Knowledge Information in Agriculture Project which was initiated to unlock market information in the southern corridor.

# 5 | Conclusions and recommendations

There have been varied efforts to increase the domestic production of edible oils in Tanzania. As part of these efforts, the government employed both fiscal and non-fiscal incentives to increase the production of oil seeds and encourage industrial investments in the edible oils sector. These incentives include the removal of import duty from processing equipment and increased import duty on imported crude and refined edible oils. The increase in import duty on crude and refined edible oils did not meet the intended purpose of bolstering the competitiveness of domestically produced edible oils. The expected increase in domestic production of edible oils and/or the drop in the volume of imported oils did not respond accordingly. The consequence of the reforms has instead been an increased final price of the edible oils in the country, the burden that largely falls to the final consumers, the majority of whom are poor.

This study undertook a cost-benefit assessment of the proposed measures considering that edible oil imports have significant revenue implications for the government through the collected taxes. This report provides empirical evidence on the viability of such reforms and provides recommendations for the next step.

The report indicates that the previous tax reforms resulted in within-product substitution accompanied by the switch from importing crude oil to refined oil. Using a three-case scenario, the partial reduction of import duty on the imported palm and sunflower oils only is found to result in a massive loss of government revenue collection from the potential import duty and VAT on import duty because of the importation of low-valued crude oil and VAT on the import duty. However, this can be reverted if the reduction of import duty is successfully transferred to consumers in terms of lower prices by at least 70% of the reduction in import duty. The welfare improvement to consumers will outweigh the losses in government revenue.

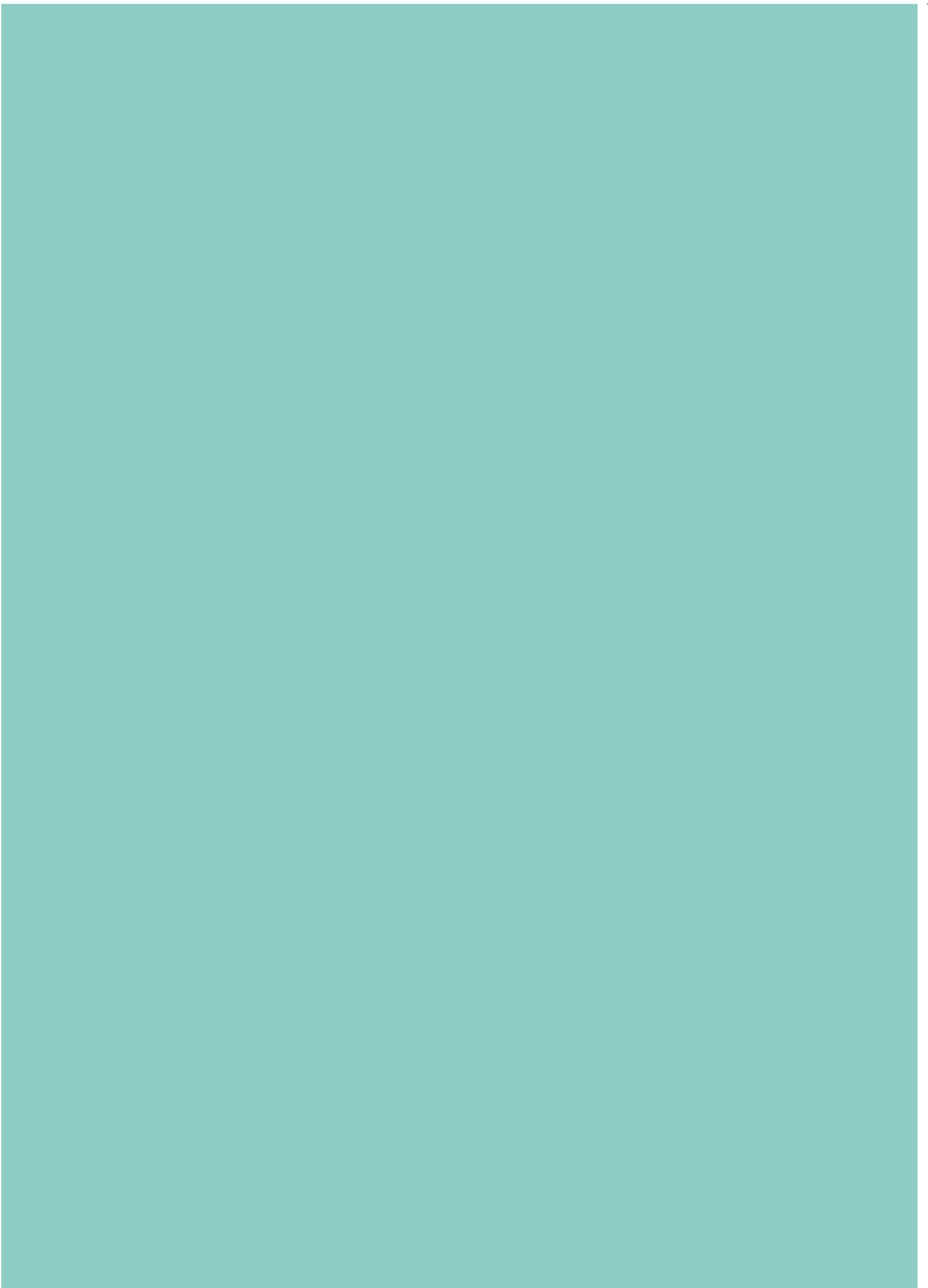
Complete removal of Import duty on the imported palm and sunflower oils only will result in a further increase in the proportion of refined oil imported as compared to the status and a massive loss of

government revenue. This is an unlikely option for the Ministry of Finance and Planning to adopt since the complete removal of import duty will be against the common tariff rates under the East African Community Customs Union.

Additionally, the removal of VAT on locally produced sunflower oil will lower the price and hence raise the demand which is expected to increase domestic production and supply of sunflower oil seeds, crude, and refined sunflower oils. Although this option would lead to a revenue loss for the first 3 years when the intervention is in place, a return of VAT after the third year will result in positive net gains since the industry will be operating at a higher level of production. This implies that while in the short term the government will experience a decrease in expected net government revenue, the mid-and long-term effect will be characterized by an increase in expected net revenues compared to the situation without any intervention. Further, there will be gains and losses in terms of employment. However, for this intervention to be successful, production constraints should be unlocked.

Lastly, a combination of reducing import duty on palm oil and removal of VAT on locally refined sunflower led to government revenue losses although this could be offset by subsequent consumer surplus which would outweigh the government revenue collection loss hence the net welfare will be positive.

Given the three scenarios, the study concludes that partial reduction of import duty on palm and sunflower oil and removal of VAT on domestic sunflower production is likely to lead to net gains in Tanzania. However, it is recommended that these reforms be in a phased approach, starting with the reduction of import duty which has a potential direct effect on consumer welfare followed by zero-rating VAT. It is noteworthy that the expected gains in the proposed scenario would only suffice if the non-fiscal measures to improve productivity and quality (as explained in the report) are instituted along with the fiscal incentives.





**Ministry of Agriculture**  
P.O. Box 2182, 40487 Dodoma, Tanzania  
Tel: +255 26-2321407  
Email: [ps@kilimo.go.tz](mailto:ps@kilimo.go.tz) [www.kilimo.go.tz](http://www.kilimo.go.tz)