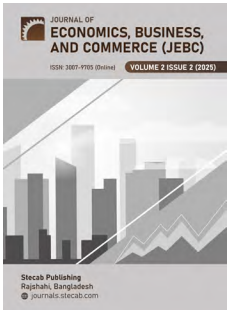

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Research Article

Contribution of Cash Crops to Export Trade in a Middle-Income Country: An Analysis of Agricultural Indicators in Tanzania

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About Article

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ABSTRACT

Understanding the role of cash crop export in strengthening a country's middle-income class is paramount. Export crop trade data from selected crops between 1995 and 2000 were analysed using Box and Jenkins' model to assess implications for middle-income countries. The Box and Jenkins forecast projected export trade values up to the year 2028. Results indicate that increased exporting of crops and the achievement of middle-income country status have a bidirectional influence. The increase in crop exports influenced middle-income countries status achievement, and middle-income countries status led to more exports of cash crops. The intermediation of Gross National Income was also effective, significantly contributing to crop export and growth of Gross National Income. Further, cashew and sisals crops showed a significant upward trend, thus calling for country crop specific investment strategy. Also, there should be more focus on increase exports crops and policy strategies. Strategic investment and reassessment of market forces and export standards requirements are recommended for further study. The study extends the Ricardian comparative advantage framework by highlighting Tanzania's stable and positive export performance in sisal and cashew during economic shocks.

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1. INTRODUCTION

Globally, countries with an agricultural base tend to focus on economic growth through export crop strategies. However, amid various global pandemics, climate change, and escalating conflicts, some countries experienced economic shocks. Other countries reached Middle-Income Country (MIC) status ahead of the World Bank's projections (Akeel *et al.*, 2021). MICs represent a diverse group of countries with varying levels of development, economic structures, and social conditions. The MICs status achievement is an indicator of country development progress, thus attracting foreign investment, increasing support for foreign aid, and improving social and economic infrastructures (Ahmed & Sadik, 2025).

Despite countries like Ukraine and Moldova being in the middle-income class with a significant economic base in the Agricultural sector(Shevchuk *et al.*, 2023), Georgia, and Albania, focused primarily on the tourism sector. Also, the agriculture sector was among the sector-specific sufficiently accelerated Ghanato reach middle-income status by 2015 (Breisinger *et al.*, 2009). Nevertheless, middle-income countries in Africa, including Nigeria, Kenya, Morocco, Ghana, and Tanzania, also differ on an agricultural economic base, where crop-specific exporting came from (Bouët *et al.*, 2020). While exporting crops is contributing to income levels, income measurements is a paradox and remain in debates from individual to aggregate measures.

The debate on stratification criteria for middle-income status remains in question, with mixed views (Madrueno-Aguilar, 2017; Rasch, 2017; Shillcutt *et al.*, 2009). The debates were on mixed measures, which were the accuracy of measurements, the use of absolute or relative income measures, in-person valuation of lives across countries, and the dynamic shifts in the World Bank's country income classification. However, the current World Bank's country income measurement shifts dramatically yearly. While using the per capita Gross National Income as the main indicator (GNI) (Clemens & Kremer, 2016). In 2023, there was 10% increase in the shares of low-middle countries compared to 1987, among East African countries (Metreau *et al.*, 2024).

Using the existing measures, earnings from cash export crops remain difficult to measure among countries with agriculture base. However, studies (Achterbosch *et al.*, 2014; Mirza *et al.*, 2016) show total cash crops exported is included on per capita income generated by residents both domestically and abroad, ceteris peribus. Moyo *et al.* (2012) found that cash crops export contributes to about 28% - 30% of GDP. However, the contribution varies due to variation in global demands of cash crops caused by price volatility, export restrictions, inflation, and supplies from producer countries (Estmann, 2023; Staugaitis & Vaznonis, 2022).

The trends on agricultural export crops are viewed differently, either decline, no changes or improved, caused by external and internal factors (Anderson, 2010; Wik *et al.*, 2012). Study indicated external determinants were terms of trade, elasticity of demand (Lilik Sugiharti *et al.*, 2019). The internal factors were domestic policies, infrastructures, agricultural export credit and taxation on crop exports (Kandiero & Randa, 2004).

Exporting of crops, like many other commodities, may fall into the commodity export trap (Nkurunziza, 2021). The commodity export trap is an undetermined condition of whether the export price will decline, increase, or retain in a constant price phase. This uncertainty in price may cause market speculations that hinder crop export stability and reduces country's dependence on crops export market (Gouel, 2012; Varangis & Larson, 1996). Study by Cooksey (2004), indicated agricultural sector challenges; suffering from diversity in capability on farming system, cultivation practices, livelihood status, landlessness, and the degree of market integration, hinders crop export strategy to meet market demands. Despite these challenges, earning from agriculture, which is 80% backbone of Tanzania's rural economy, Tanzania and other agriculturally based countries were successfully attained the middle-income class.

Considering that, the growth of the economy, income generation, and foreign exchange earnings for developing countries is attributed to export crops (Dawson, 2005), countries need to understand the significant influence of crop-specific. Moreover, economic policy, improved technology, and comparative advantage identification need to be informed by the present study. The majority of these studies (Li *et al.*, 2020; Ma *et al.*, 2022; Raphael, 2024) are with imprecision and indirectness on Middle-income countries, and are focusing on crop challenges, country development, and growth of Gross Domestic Product. Thus, understanding of the specific crop's contributions to per capita Gross National Income is rarely accredited by literatures. This study aims to examine the contribution of cash crops to export trade in Tanzania using the time-series data from 1995-2020 to analyze the causal relationship.

2. LITERATURE REVIEW

2.1. History of Tanzania on exporting crops

Historically, Tanzania varied differently in geographical structure and favourable climatic conditions with plenty of arable land, which supports a variety of crops produced. Thus, during pre-colonial, colonial, and after independence in 1961, Tanzania exported coffee, cotton, sisal, tea, tobacco, cashew nuts, and cloves (Coulson, 2013). Tobacco started to be produced in Ruvuma during the 1930s with a 'Plant More Crops' campaign by the British economy, aiming to improve livelihoods after the Great Depression (Ndomba, 2018).

In 1920, coffee cultivation was introduced in the Moshi, Arusha, and Mbeya regions of Tanzania by German colonists, and some coffee estates were established (Baffes, 2003). In 1960s, coffee marketing and trade were mostly controlled by the cooperatives and the Coffee Board. Coffee export in Tanzania was under several reforms; in 1990, timely payment was made by the Coffee Board to cooperatives, and in 1998/99, there was an increase of Tax burden for producers (Baffes, 2003; Kessy, 2020).

Cotton cultivation became the main economic activity in 1919 to Western part of Tanzania (then Tanganyika) (Seimu, 2020). Kingu (2014), found that cotton export in Tanzania is determined by the real exchange rate and agricultural productivity. However, the cotton export sector growth from primary value chain actor was found to be affected by supplies of quality seeds, pesticides, given farm-get price, and budget support (Kulaya, 2020).

Portuguese traders were the first to introduce cashew nut cultivation in Tanzania from Brazil during the 16th Century (Martin *et al.*, 1997). The first export was 210 tons exported to India in 1938. The historical export shows that, in the middle of the 19th century, cashew export experienced a dramatic decline in 1973 from 145,000 tonnes to 16,500tonnes in 1986 and rose to 70,320 tonnes in 1994 (Martin *et al.*, 1997).

Details in Table 1 show different types of crops produced in Tanzania, varying with regions; however, available literatures indicated export statistics with mixed standards by volume and earnings in US dollars. Horticultural production is also an emerging sector with potential growth. These crops remain a potential for the economy of the country where 80% of its population depends on agriculture.

Table 1. Crop type, contribution and projected export statistics by region

Crop	Contribution	Export Statistics (2020-2025)	Regions Grown	Source
Cashew Nuts	Major foreign exchange earner, contributing significantly to export revenues.	Export volumes fluctuated between 200,000–300,000 metric tons annually	Mtwara, Lindi, Ruvuma, Coast	https://www.statista.com
Coffee	Key export crop, particularly Arabica and Robusta varieties.	Export earnings ranged from $100–150 million annually	Kilimanjaro, Mbeya, Arusha, Kagera	https://unitedrepublicoftanzania.com
Tobacco	Significant contributor to agricultural GDP and export revenues.	Export volumes averaged 60,000–80,000 metric tons annually	Tabora, Shinyanga, Ruvuma	www.repoa.or.tz
Cotton	Important for both domestic use and export.	Export earnings ranged from $50–100 million annually.	Mwanza, Shinyanga, Mara, Simiyu	https://unitedrepublicoftanzania.com
Sisal	*Historically a leading export crop, used in various industries.*	*Export volumes averaged 30,000–40,000 metric tons annually.*	*Tanga, Morogoro, Kilimanjaro*	*www.repoa.or.tz*
Tea	*Contributes to export earnings and rural livelihoods.*	*Export earnings ranged from $40–60 million annually.*	*Iringa, Njombe, Mbeya*	*https://unitedrepublicoftanzania.com*
Cloves	*Iconic crop of Zanzibar, contributing significantly to the island's economy.*	*Export volumes averaged 8,000–10,000 metric tons annually.*	*Zanzibar (Unguja and Pemba Islands)*	*www.repoa.or.tz*
Horticultural Products	*Emerging sector with high potential for growth.*	*Export earnings exceeded $200 million annually by 2025*	*Arusha, Kilimanjaro, Morogoro*	*https://www.statista.com*

Tanzania was included and ranked among MIC by July 2020, ahead of its country's objectives derived from Tanzania Development Vision (TDV) 2025 (Akeel *et al.*, 2021). This country's vision aimed by the year 2025, Tanzania would have been expanded to a lower-middle-income country (LMIC), which means a country should have a gross national income (GNI) per capita between $1,046 and $4,095. There are two classifications of Middle-income countries (MICs) set by the World Bank to describe countries based on their per capita income levels. The second is Upper-middle-income countries, where GNI is between $4,096 and $12,695 (Akeel *et al.*, 2021). This achievement is a result of many efforts include agricultural development and other economically related programs.

Akeel *et al.* (2021), suggested means to succeed in expansion to MIC, the study recommended strategies like adding value to cash crops before exporting, allowing self-market adjustment on prices for cash crops, and supporting rural households to produce more market-demand-oriented crops. With an impact from the large-scale transformation of agriculture to become high-income earners, policies on land productivity were proposed to support agricultural growth (Wineman *et al.*, 2020). However, when promoting these strategies, crop industry development needs to consider input cost, production cost, labour, marketing, and institutional challenges (Schut *et al.*, 2015; Altenbuchner *et al.*, 2018). Coverage of the defined cost is an attribute to increase crop production and thus meet export market demands.

2.2. Tanzania economic development programs (1960-2025)

However, being among the MIC, depending on agricultural crops since its independence in 1961, Tanzania has been backing up its economy (Ellis and Mdoe, 2003; Coulson, 2013) using various programs. In Agriculture, programs and interventions such as Agricultural first, Agricultural Sector Development Program (ASDP) phase I and II-, and Five-Year Development Plan (Mpogole *et al.*, 2020) were implemented to boost agricultural crop production and exports.

In consideration of the potential export crops, there was the establishment of the Southern Agricultural Growth Corridor

of Tanzania (SAGCOT) and TADB – Tanzania Agriculture Development Bank, institutions that were mandated to promote the growth of the agricultural sector in Tanzania (Lahr *et al.*, 2016). Tanzania has also introduced the Agriculture Sector Development Strategy (ASDP) I and II, focusing on the transformation to increase agricultural irrigation development, food security, and export of high-value crops (URT, 2017). These strategies were associated with the provision of Government funding for training and extension services to students joining agricultural colleges. Efforts have also been made to train farmers in the correct use of crop pesticides and systems intensification, and constructions of crop irrigation schemes and warehouses. Research has also discovered 25 new types of seeds, for cotton (2), maize (3), beans (9), peanuts (5), tobacco (5), and rice (1) (Government Projects, 2023).

With regard to cash crops specifically, Tanzania is one of the LMICs export more than six cash crops, and among them are coffee, tobacco, cotton, cashew nuts, cloves, tea, and sisal (Paul *et al.*, 2022). However, with an example from the cashew nut, which faced price instability in a 2019 study by Oritsejafor & Cooper (2021) found export of agricultural products from Tanzania is determined by distance to export destination, and the weak realization of the country's full potential in agricultural and illegal cross-border trade. Akeel *et al.* (2021) made an argument that the country has immense agricultural resource endowments, but the sector has been sandwiched by an unfavourable policy and regulatory environment at various stages of the value chain to present.

Despite Tanzania being the main exporter of food crops to other EAC countries, a small amount of export foodstuffs to Southern African Countries (SADC) was observed in the same period, ranging from 37,000 - 97,000 tons, and the products' value ranged from 13,000,000 - 75,000,000 USD annually (Oritsejafor & Cooper, 2021). In Tanzania, the GDP share of agricultural products was 23 percent between 2010 to 2019 and increased to 27.7 percent from 2016 to 2021(Finance, 2020). At the same time, some key cash crops (cotton, cashew-nuts, coffee, and sisal) experience declines in productivity, while export earnings diminish from 30 to 24.1 percent, respectively (Finance, 2021) yet Tanzania ranked among LMIC in 2020. This poses a question, does export crops matter?

2.3. Theoretical review

Dhanaraj and Beamish (2003) modelled an export performance of a firm is well-dressed by Resource based view theory. The authors argue that a firm's export goods strategy based on this theory is determined by firm size, enterprise, and technology adopted. Additionally, a study by (Alam & Myovella, 2016) found that existing in the export market is also a competitive advantage, thus requiring contributing to the increase in economies of scale, progression in technology, improved efficiencies, and eventually attaining an increase and expansion in income status.

Using the Adaptive Expectation Theory (AET) by Milton Friedman (Birol, 2014), the theory entails that export crops progressing from least developing and developed countries depend on how much information is available to decision makers in making prices, planning for outputs, exporting, and purchasing. Study on US interstate trade and export by Dall'Erba *et al.* (2021) found crops producer profit earning depends on future expectations and events, thus it is important to assess weather and other related events to determine production planning and export progress.

However, profit earning is subject to a mechanism for the determination of the country's export commodity price, which is assumed to be the weighted average of the current price and past prices (Frankel & Froot, 1985). Thus, according to (Gertchev, 2007) when there are adaptive expectations on future supplies of crops to the export markets, disregarding the existing and unforeseen challenges and economic shocks, the theory is possibly guiding the determination of quantities produced, price expected, and monetary equilibrium of the exporting country.

Despite the unforeseen challenges and economic shocks, (Legrand, 2023) on study of Russian-Ukraine war is escalating the shortage of global food stocks. The study proposed future rely on the rational expectations storage model to mitigate unexpected price fluctuations. Senjur (2012) made an earlier contribution on export trade, these challenges could lead to directional changes the interest rate in an open economy and affect the GDP of country, consequently can be escalated by inflation rises or fall above the target, and below the target respectively.

Focusing on the macroeconomic model, country growth is efficiency-based as well as aggregate demand-driven. Whereas this aggregate demand affects GDP not just in the short run but also in the long run (Senjur, 2012). On attainment of Middle-Income Countries status, these aggregate demands influence export growth via the foreign trade multiplier, which contributes to foreign currency earnings following foreign exchange. The foreign currency gain is used to finance imported capital, manufacturing, and technology goods (Alam & Myovella, 2016).

Contrary to the macroeconomic model, the Ricardian model (comparative advantage) assumes technology is the only factor that differs across countries; meanwhile, goods are homogeneous and free shipping (Golub & Hsieh, 2000). Labourers have homogeneity within a country, but with different productivity across countries. Therefore, the performance of Tanzania as an LMIC in the export market to maintain and expand its status requires substantial decisions in promoting its export crops as one of the valuable factors in productivity. The same argument made by the World Bank that Tanzania should attract private investment, boosting productivity, and accelerate the adoption of digital technologies to reach its ambitious (Akeel, 2021).

On the distinction from various studies (Moyo *et al.*, 2012; Estmann, 2023; Staugaitis & Vaznonis, 2022) the GNI relationship with export crops is left uncovered by literatures particularly in country specific like Tanzania. Study by Moyo *et al.* (2012) explored countries' driving efforts to achieve MIC status and livelihood contributions, and MIC status achievement remains understudied. Rare studies explored the relationship between cash crop export and expansion to the achievement of MIC status. Therefore, studies on export crops causation analysis remain paramount to contribute knowledge on the country's growth indicators and expansion to MIC

status. To address this gap, the methodological approach of the Autoregressive Integrated Moving Average (ARIMA) model was employed because it captures time-dependent patterns in growth indicators (Fatima & Rahimi, 2024).

Fallen from MIC is not new, Akeel., (2021) find out that 23 countries have fallen from MIC to LMIC status and others from HIC to MIC due to natural disasters and macroeconomic instability. Henceforth, reflection is needed on strategic crop exportation to influence expansion to MIC status. This study examined Tanzania's cash crop contribution to export trade between the year 1995 and 2020, and the country's expansion to Middle Income Class Country. It also determined sustainable export crops strategies for a country, and MIC policy measures were recommended.

3. METHODOLOGY

In order to determine causality analysis between crop exports and expansion to middle income class, six crops were selected from a list of available secondary data on export crops from the Bank of Tanzania for the years 1995 to 2020. Theoretical review entails an increase in exports of goods, which contribute to GNI and are an indicator of MIC determination. The present analysis employed income from exported crops, among others, which form part of GNI. The income from export value of goods was computed as the regressand, meanwhile value of cotton, coffee, sisal, cashew nuts, tea, and tobacco were regressors, ceteris peribus.

The autoregression (p) process tests stationarity of the data, which simplifies the forecasting process. If the data follows non-stationarity, it has to be differenced (d) and (q) is the moving average parameters which measures ordering fit (Pasari & Shah, 2020). The data is also tested for its moving average fit (which is done in part q of the analysis process). The parameters (p, d, and q), are applied to develop a forecast. Box and Jenkins' model of analysis was used based on three principles: autoregression (AR), differencing (DD), and moving average (MA). An ARIMA(p,d,q) model was employed to account for ARIMA regression to account for relationship between export crop values and country growth, and an ARIMA forecast that predicts future values of crop specific on exports (Bouznad *et al.*, 2020).

3.1. Augmented Dickey Fuller (ADF) unit root test

The four stages were done to estimate the results; the first was to establish the maximum order of integration (d max) using the Augmented Dickey Fuller (ADF) unit root test for a series stationary on the crop value and total export in their natural log-levels. The results show that there is a unit root in crop value and total export, thus they are not stationary.

3.2. Optimal Lag Order (k)

In determine the optimal lag order, which is the second stage the Akaike Information Criteria (AIC), Likelihood Ratio (LR), Hannan Quinn Information Criteria (HQIC), Schwartz Bayesian Information Criteria (SBIC), and Forecast Prediction Error (FPE) criteria to establish and select the optimal lag length of the VAR(k) which is the optimal maximum order of integration. Sambuo, (2015) argue that there are advantages of parsimony, fewer lags, and more accurate forecasting by considering the components of the VAR (k) model. The tabulated results are shown:

Table 2. Selection Order Criteria

Sample: 1990 - 2020					**Number of obs = 30**			
Lag	**LL**	**LR**	**Df**	**P**	**FPE**	**AIC**	**HQIC**	**SBIC**
0	7.40125				.06594	.063026	.130326	.460685
1	20.6213	26.44	4	0.000	.018706	-1.2233	-1.14759	-.775934
2	21.8936	2.5445	4	0.111	.018828	-1.25196	-1.16783	-.754885
3	21.9231	.05897	4	0.808	.021844	-1.1498	-1.05726	-.603018
4	26.6608	9.4754	4	0.002	.015667*	-1.54324*	-1.44229*	-.946751

Endogenous: Exports goods; Exogenous: Coffee, Cotton, Sisal, Tea, Tobacco, Cashew, Clove

Basing on the LR information criteria, FPE information criteria, AIC, HQIC and SBIC they all significant at lag 1 and lag 4. Therefore (1) lag and (4) lag order of VAR model preserve some degree of freedom for estimation.

Using the established maximal order of integration and the selected VAR length, the following augmented VAR (4) model was estimated using the OLS technique and the results are in Table 3 below:

$$lnEx_t = \alpha_0 + \sum_{i=1}^{k+d} \beta_{1i}\, lnCof_t + \sum_{i=1}^{k+d} \gamma_{1i}\, lnCot_t + \sum_{i=1}^{k+d} \gamma_{1i}\, lnSis_t + \sum_{i=1}^{k+d} \gamma_{1i}\, lnTea_t + \sum_{i=1}^{k+d} \gamma_{1i}\, lnTob_t + \sum_{i=1}^{k+d} \gamma_{1i}\, lnCas_t + \sum_{i=1}^{k+d} \gamma_{1i}\, lnClo_t + \mu_{1t} \quad \text{....(2)}$$

Table 3. Ordinary Least Squares Regression (Output 1)

Dependent variable					**Exports**	
Independent variable	**Coeff**	**OPG. Std. Err**	**Z**	**P > z**	**95% Conf Interval**	
Constant	2.1101	1.8218	1.16	0.247	-1.4605	5.6808
Coffee	.1318	.2328	0.57	0.571	-.3245	.5880
Cotton	-.1747	.1531	-1.14	0.254	-.4747	.1253

Sisal	.3349*	.1780*	1.88*	0.060*	-.0140*	.6838*
Tea	.1978	.1522	1.30	0.194	-.1005	.4961
Tobacco	.0319	.1374	0.23	0.816	-.2374	-.3013
Cashew	.2376*	.1117*	2.13*	0.034*	.0185*	.4567*
Cloves	.0165	.0512	0.32	0.747	-.0838	.1168
ar L1	.9846	.0912	10.79	0.000	-.8057	1.1635
ma L1	1	.	.	.	.	.
/sigma	.0705	.0161	4.36	0.00	.0388	.1021
Log likelihood						23.156
Wald Chi2						475.87

Table 2 shows the results from the ARIMA model, which indicated cashew nut crop is significant at ($P < 0.05$) and the sisal crop is significant at ($P < 0.1$). Therefore, there is a causality of the two crops on increasing total exports in Tanzania. By implication, with the attainment of LMIC status, Sisal had an annual average rate of 0.33 significant change, but positive with a unit change of export growth. Cashew nut had an average rate of 0.23 significant change, but positive for a unit change of export growth. Meanwhile, coffee, cotton, tea, cloves, and tobacco did not have a significant effect on export growth. Among others, cotton has shown a negative relationship with export growth.

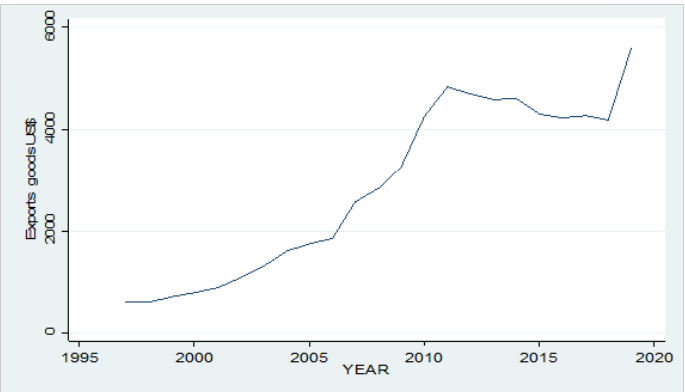

Figure 1. Exports of goods trends in Tanzania
Source: Authors' computation

4. RESULTS AND DISCUSSION

The findings in Figure 1 show trend results on exports of goods have experienced a significant decrease from the year 2011 to 2017 and a sharp increase from the year 2018 to 2023, where Tanzania ranked among LMIC by 2020. Changes from 2011 to 2017 were sourced by the major global recessions of 2009 escalated to 2017. Successful achievement of LMIC is correctly proven by Tanzania's economic outlook in Real GDP in the year 2021 to 2022, which grew from 4.8% to 4.90% and projected a sharp increase to 5.6% by 2023 (African Economic Outlook, 2022). Thus, exports of crops have a functional change on country total exports of goods associated with government policy on accelerating tourist inflows, the rollout Covid 19 vaccinations, and the opening of trade barriers. The results have proven that, disregarding the externalities and other market forces, annual exports of good was positive, specifically exports of crops, taking into consideration that Tanzania opted for market liberalization followed by multiparty general election since 1995.

Notwithstanding with country specific on temporary ban on the exportation of crops from Tanzania to its neighbouring country, the major reasons were stabilising food security and or political reasons with specific crop e.g, maize. The export ban did not affect the country's export trends of goods, food crops inclusive (Figure 1). Contrary with (Estmann, 2023) argue that there should be freer trade as a solution for increased food supply and can stabilize food prices, these findings prove that temporary government intervention and measures contributed to the economic growth of a producer country and prevented it from economic shock waves.

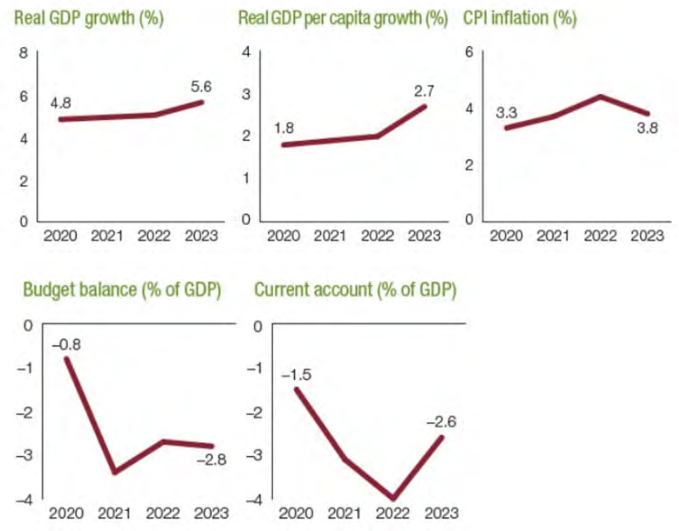

Figure 2. Economic outlook of Tanzania year 2023
Source: African Economic Outlook, (2022)

Findings on crop export specific are shown in Figure 5. The results are such that, for the past 16 years, Cashewnuts export shows a positive trend despite minor fluctuation due to political and economic shocks. Even though there was a sharp decrease in 2017 due to an export ban imposed by the existing head of state, the succeeding year, cashew nut exportation kept increasing. Policymakers are recommended to put more

emphasis on cashew nuts strategic investment, as it grew from USD 201 million in 2016 to USD 353.1 million in 2019 (Finance, 2021). However, coffee shows a perennial effect on its exportation, which grew from USD 109 million to USD 153.4 million in the years 2016 to 2019, respectively (Finance, 2021). Country historical influence on coffee, tobacco, and sisal needs re-assessment along the value chain, with the changing market forces and compliance with export standards and certifications (Kangile *et al.*, 2021). With regard to Sisal, Figure 6 indicates a positive response in increasing its exportation, ceteris paribus. The sisal exportation in 2019 amounted to 22,779.9 tonnes, generating USD 38.057 million, while in 2020, a total of 26,059.8 tonnes was exported, equivalent to USD 41.830 million earned by the country (Citizen, n.d.). Following a decline of youth participation in sisal production by 80.26% to 62.91% in 2008 and 2015, respectively (Citizen, n.d.), associated with a long payback period, high cost of production, and low price due to poor market competition (Urassa & Beleko, 2022).

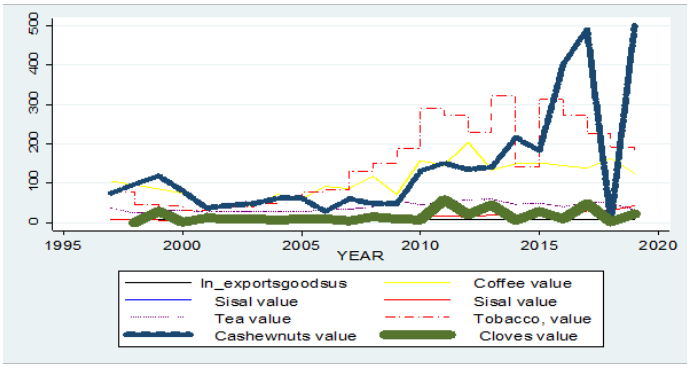

Figure 3. Trends of potential cash crops in Tanzania (1995 – 2020).

In forecasting six cash crops in Tanzania, cashewnut indicated a potential gain of an average amount between USD 250 million and USD 350 million from the year 2020 to 2028 (Figure 3). Meanwhile, coffee forecasting shows the average USD 150 million will be earned by the year 2028, by a country in Figure 4; Figure 5 shows Cotton forecasted to earn the country an average amount of USD 75 million. Sisal in Tanzania is projected to have a significant positive trend with an increase in exportation at an increase from an earning of USD 40 million in the year 2020 to USD 90 million by the year 2028. Tea is forecasted to have a constant earning of USD 40 million by the year 2028, and Tobacco earnings forecasted to be USD 150 million by the same year in figures 6 and figures 7.

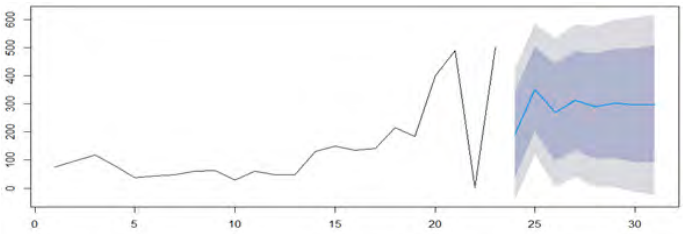

Figure 4. Cashew forecasting 1995-2028

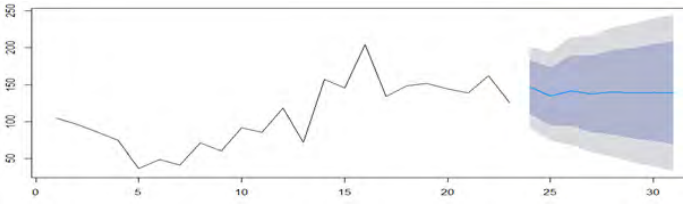

Figure 5. Coffee forecasting 1995-2028

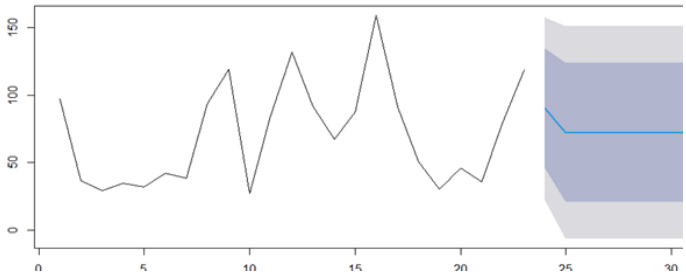

Figure 6. Cotton forecasting 1995-2028

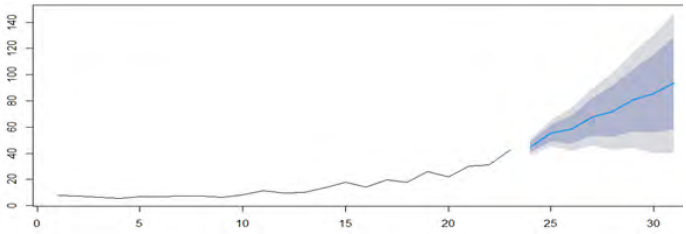

Figure 7. Sisal forecasting 1995-2028

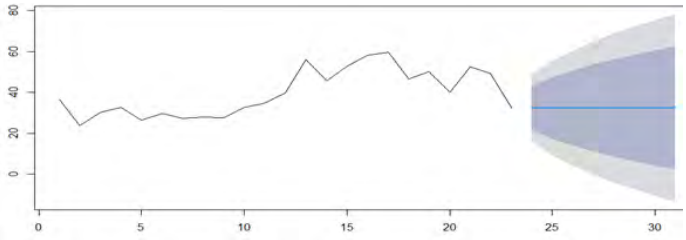

Figure 8. Tea forecasting 1995-2028

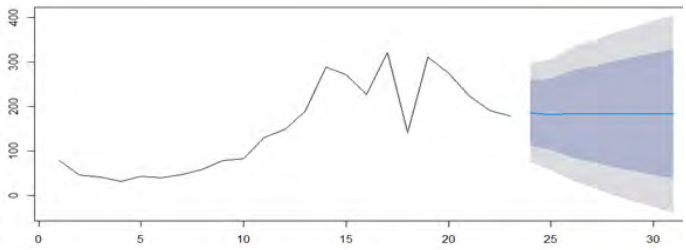

Figure 9. Tobacco forecasting 1995-2028.

4.1. Theoretical implication

The review of theories on the export trade potential of cash crops on Middle Income Status achievements provides unclear cuts on specific theories. However, the improvisation of different macroeconomic models and theories to ensure sufficient economic growth is of added advantage. The adaptive

expectation theory remains an economic advantage in the present study, following aggregate demands of cash crops from the export markets, together with the influence of a country's expectations. During exporting, adaptive expectation theory guides the expectation that some crops will remain stable in the market, thus contributing to the economic growth of the country. The contribution to macroeconomic models is such that the study found the changing market forces, compliance issues, export standards, and certifications to ensure export crops flow, also affect interest rates charging and foreign currency gaining. Thus, reinforcement and adjustment in monetary and fiscal policy are paramount to ensure a balanced equilibrium in interest rates as a measure of market forces. However, the quality outputs of crops were beyond the scope of this study. The study also contributed to the Ricardian model (comparative advantage), whereas the performance of Tanzania as an LMIC in the export market requires a country to focus on Sisal and Cashew because of comparative advantage, and was observed to have stable and positive trends in economic shocks.

4.2. Policy and managerial implications

To optimize the potential of export crops, and ensure expansion to MIC's many macroeconomic actions need to be undertaken: Crop-specific Boards in collaboration with the government should develop a positivism on increasing production and supplies among farmers on future expectations and stable supplies. Specifically, the country should strategically focus on the investment for the production of cashew nuts and sisal in its strategic plan. The amount of quantities available are generally expected to be an influencing determinant of the market, buyers' choice, and expected price. In connection with this adoption of global demands for crops from information sources can contribute to export sustainability.

The Central Bank of Tanzania (BOT) should provide an actionable fiscal and monetary policy to balance interest rates whenever inflation rises above the target, which could affect export crop prices, and vice versa if inflation falls below the target. The policy actions are paramount in the performance of LMIC's expansion to MIC's as well as are responsible for aggregating and stabilizing the economy of the country. The country should focus on gaining foreign currency by increasing the export of crops. The market identification and demands of crops should be centralized. Whereas the segmentation of the market for coffee, cashew nuts, sisal, and tea has multiplier effects during trading and can thus contribute to foreign currency earnings following foreign exchange with various supply chains.

In this view, the gained foreign currency should be used on LMIC's capital financing the manufacturing goods as a strategy for expansion to MICs. Simultaneously, foreign currency can promote a country's technological advancement through the purchasing of modern equipment for processing cash crops to increase competitiveness. The country's focus should also be on promoting export crops on a regional basis with competitive and comparative advantages as a country. A large producing crop-specific area should be promoted and equipped as an Export Processing Zone of the founding crop in large quantities. For example, as Cashet is largely produced in southern Tanzania, a specified zone for processing and exportation needs to be in the same area.

For the past 30 years, Sisal and Cashew have remained stable and positive in economic effects, thus contributing to the economic growth of the country. The country should strategically focus on investment in the production of these two crops in its coming five-year strategic plan. The study is also recommending plan should also focus on supporting other crops, taking into consideration that there is a huge climate change and adaptation is perennial.

Proper agricultural incentives from policymakers to attract youth participation in crop production are also recommended. Further, farmers should expand crop production to increase the GDP of a country and extend to the MIC status. Furthermore, the government should revisit terms of trade and export agreements to ensure sustainable and positive trends for economic growth.

5. CONCLUSION

The present study concluded that cashew nut and sisal crops were the major crops that contributed to the achievement of the country's MIC status. Crop exportation is projected to increase from the year 2022, specifically for crops that are raw material oriented for natural fibres and automotive sectors, like Sisal. The demand increase is projected to be caused by global market demand for green products, fostering environmental sustainability. Political and economic shocks were concluded to cause experienced export crop fluctuations with a rare effect on MIC status achievement. Thus, cash crop export trade is a paramount indicator of the MIC status of countries. More emphasis on strategic investment in cashewnut and sisal production is recommended to policymakers. Meanwhile, re-assessment of the changing market forces, compliance with international markets, export standards, and crop certifications are vital for establishing innovations on crops productions and export strategies. Studies on other export commodities in relation to MIC status achievement were beyond the scope of this study; thus are recommended for further studies.

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