Is Uganda's Trade complementary with its EAC partners?

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Abstract

This study evaluates the extent to which Uganda's export profile aligns with the import needs of its East African Community partner states, with the aim of identifying opportunities for enhanced regional trade. Using sectoral trade data from the International Trade Centre and UN Comtrade, the study applies the Trade Complementarity Index (TCI) and Trade Intensity Index (TII) to analyze Uganda's trade flows with EAC partners between 2013 and 2023. The results show that Uganda's trade complementarity with EAC partners remains generally low across several key sectors, including prepared foodstuffs and chemicals, despite significant regional demand and preferential market access. Trade intensity is strongest with traditional partners such as South Sudan and Kenya, while newer markets like Tanzania and Rwanda remain underutilized. The findings highlight persistent structural misalignments between Uganda's export basket and regional import demand. The study provides sector-specific evidence to inform policies and business strategies aimed at strengthening Uganda's export performance and deepening regional trade integration within the EAC.

Keywords: *Trade complementarity, Trade intensity, Uganda, East African Community, Regional Integration*

JEL Classification: F14, F15, F13, O24

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1. Introduction

While intra-African trade has grown in recent years, the continent still trades more with the rest of the world than within itself, lagging behind other regions in terms of intra-regional trade intensity; in fact, Fofack (2020) notes that Africa received only about 7 percent of its own exports. Despite the East African Community (EAC) recognition as the most successful of Africa's regional trade agreements (Ofori-Amoah, 2024), intra-regional trade among member states remains surprisingly low. Relatedly, although Uganda maintains strong trade relations with its EAC partner states, the overall volume of trade within the bloc remains lower than anticipated, suggesting missed opportunities for deeper economic integration. Essentially, with the exception of products from the milling industry (HS 11), which account for 22.4%, Uganda's share of the EAC's imports during the period 2021-2023 falls below 10% (see Appendix A1).

Uganda's exports to the EAC surged by 167.4% from 2012 to 2023, reaching $6.3 billion (UN Comtrade, 2024). Despite having preferential access, Uganda's share of the EAC market remains modest, accounting for only 7.4% in 2023. For instance, in the highly lucrative Prepared Foodstuffs sector, where demand within the EAC surged to $3.6 billion in 2023, Uganda's contribution was just 7.3% (UN Comtrade, 2024). While the EAC performs best in regional integration among the Regional Economic Communities of Africa (Si Tou, 2021), Anami (2024) reports that intra-EAC trade among partner states has declined from 16 percent to 14 percent in recent years, despite the presence of some of the most ambitious business protocols on the continent.

More recently, the operationalization of the COMESA-EAC-SADC Tripartite Free Trade Area (TFTA) Agreement has created an even larger marketplace for Ugandan exporters. The agreement, implemented on July 25, 2024, has already been ratified by 14 of the 29 member states across the three regional economic blocs, presenting a valuable opportunity. The TFTA spans 29 nations, accounting for 53% of the African Union's membership, more than 60% of Africa's GDP ($1.88 trillion as of 2019), and a total population of 800 million. By being one of the ratifying countries, Uganda is well-positioned to gain considerable advantages from this vast and profitable market. However, the realization of these benefits depends on the degree of trade complementarity among partner states.

Fole and Seid (2015) assert that the push to increase intra-African trade is hindered by the limited alignment between exports and imports among African countries. In essence, espousing the notion that many nations within the continent produce similar goods, leads to a lack of complementary trade flows, which reduces the potential for mutually beneficial trade relationships. This imbalance makes it difficult for countries to fully leverage their comparative advantages, thereby slowing the progress of regional integration efforts. Trade complementarity is a measure of the extent to which the export profile of one country matches the import profile of another country / countries (Drysdale,1969; Kamal, Shad, Khan, Ullah and Khan, 2022; Gumuş and Kramskova, 2024). In essence, it measures the extent to which a country's exports match another country's imports.

2. The Structure of Uganda's Trade with various Blocs

The majority of Uganda's exports to regional trading blocs were concentrated in the EAC, comprising an average of 26% of its total export value from 2019 to 2023. In 2023, Uganda's exports to the EAC totalled $2.2 billion, while those to Asia reached $2.7 billion. The data in Table 1 below indicates that Uganda's exports to Asia are surpassing those to the EAC. In fact, Table 2, Figure 1 and Figure 2 show that Uganda exported more to Asia than to the EAC in 2019, 2020, and 2023, with exports to Asia growing by 943.5% in the period 2014-2023. The varying structure of Uganda's trade above brings into question its complementarity with its destination markets and thus worth further investigation.

Table 1: Uganda's exports to selected trading blocs & regions (2014-2023) - value in USD thousand

	EAC	COMESA minus EAC	EU (28)	ASIA	AMERICA	TOTAL
2023	2,207,218	196,618	878,620	2,743,512	107,061	6,305,023
2022	1,949,782	182,226	747,318	422,399	123,841	3,577,444
2021	1,533,266	118,659	666,649	1,382,884	87,086	3,965,317
2020	1,246,720	124,238	501,516	2,141,305	64,806	4,148,958
2019	1,205,890	95,015	513,964	1,624,756	55,209	3,563,785
2018	1,459,924	93,807	540,626	866,721	55,849	3,087,274
2017	1,317,366	121,061	573,432	703,283	82,767	2,901,296
2016	1,130,617	80,774	432,130	586,065	52,820	2,482,313
2015	1,191,471	98,115	443,044	291,724	43,864	2,267,009
2014	1,108,694	111,452	478,478	262,914	53,146	2,261,964

Source: ITC / UN COMTRADE statistics

Table 2: Uganda's exports to selected trading blocs & regions by market share in percentages (%)

	EAC	COMESA minus EAC	EU (28)	ASIA	AMERICA	TOTAL
2023	35	3	14	44	2	97
2022	31	3	12	7	2	54
2021	24	2	11	22	1	60
2020	20	2	8	34	1	65
2019	19	2	8	26	1	55
2018	23	1	9	14	1	48
2017	21	2	9	11	1	44
2016	18	1	7	9	1	36
2015	19	2	7	5	1	33
2014	18	2	8	4	1	32

Source: ITC / UN COMTRADE statistics

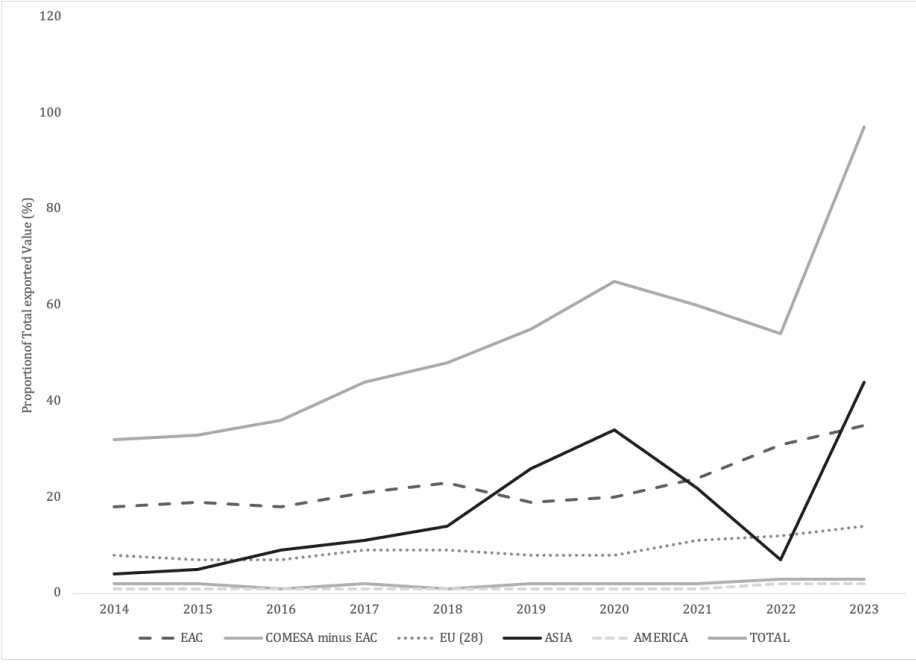

Figure 1: Graph showing Uganda's exports to various trading blocs & Regions
Source: Authors' illustrations based on ITC and UN Comtrade data

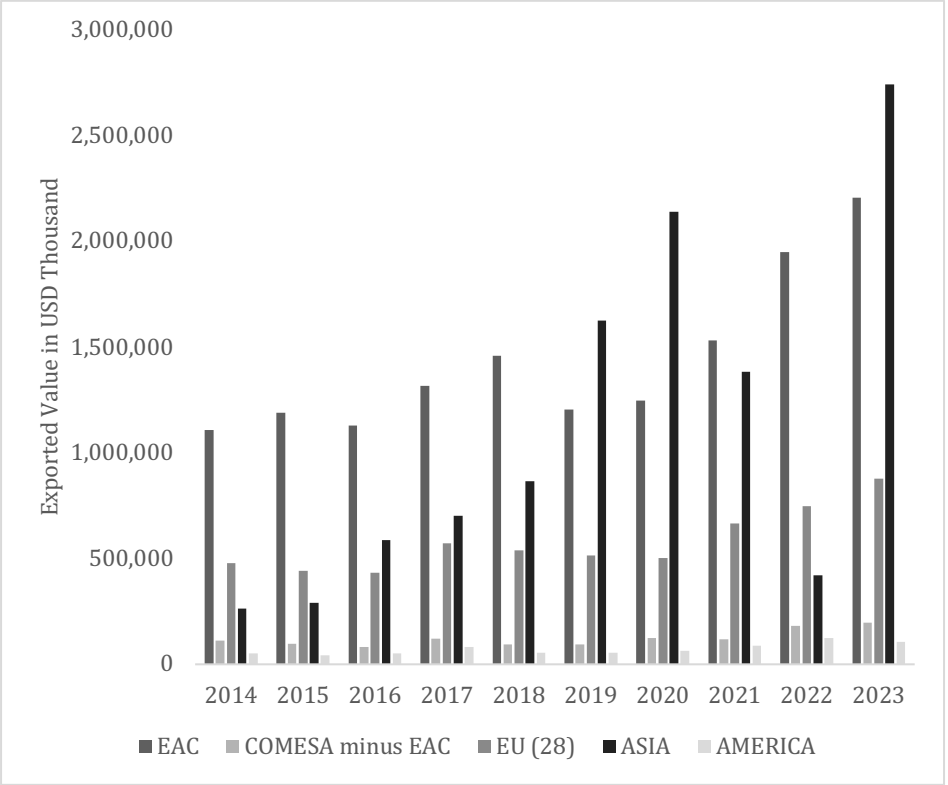

Figure 2: Graph showing the distribution of Uganda's exports to the different trading blocs

Source: Authors' illustrations based on ITC and UN Comtrade data

Although studies have considered Uganda's trade complementarity, such as, Shinyekwa and Othieno (2013), Ancharaz, Ghisu and Wan (2014), Spence (2013), Ghisu and Wan (2014), Ng'imor (2020), but they mainly established whether Uganda's trade is more focused on the EAC or other regions. Uganda's persistent low performance raises critical questions about the complementarity of Uganda's trade profile with its regional partners and its ability to leverage regional agreements such as the TFTA to enhance its trade performance and comparative advantage.

Therefore, on the basis of the aforementioned research gap, this paper is motivated by the need to enhance Uganda's trade performance within the bloc, given that the EAC is one of Africa's most successful regional economic blocs, intra-EAC trade remains low, with Uganda's share of the EAC market accounting for only 7.4% in 2023. Additionally, existing studies suggest that African nations, including Uganda, often produce similar goods, leading to

low trade complementarity. This reduces the potential for mutually beneficial trade, and thus the need to examine the alignment between Uganda's export profile and its trading partners' import needs. Lastly, while Uganda has established trade ties within the EAC, the actual volume of trade within the bloc lags behind its potential, suggestinga lack of fully capitalizing on opportunities for economic integration.

From the foregoing, the main purpose of this study is to evaluate the extent to which Uganda's trade aligns with that of its EAC partners. By identifying areas of trade complementarity, we seek to show opportunities for increased Uganda exports to EAC member states. The study is therefore guided by the following research questions (RQs): Is Uganda's export profile complementary with the import profile of its EAC partner states? What is Uganda's trade Intensity with its EAC partner states? and what is the existing potential for increased trade between Uganda & the EAC?

The rest of the paper is organized as follows: Section 2 presents the theoretical foundation of the study and a review of literature on Uganda's trade complementarity. Section 3 details the research methodology and study approach, while Section 4 presents the findings and Section 5 presents the discussions. The conclusion, policy recommendations and limitations are presented in section 6.

3.0 Literature Review

This section contains the theoretical foundation of the study, along with a review of the literature on Uganda's trade complementarity with its trading partners.

3.1 Theoretical Foundation

This paper relies on the Natural Trading Partner Hypothesis (Krugman, 1991) for theoretical guidance. The hypothesis posits that countries that are geographically close, economically complementary, or share historical, cultural, or political ties are more likely to benefit from forming preferential trade agreements (PTAs) or regional trade agreements (RTAs) with one another. The central idea is that these 'natural' trading partners already have existing trade relationships or are well-positioned to develop such relationships, making them ideal candidates for trade liberalization.

The Natural Trading Partner Hypothesis rests on several assumptions; Geographical proximity reduces transportation costs, making trade easier, while existing trade relations between countries mean that trade agreements

enhance rather than create new flows. Economic complementarity ensures that the export profiles of natural partners align with each other's import needs, minimizing the risk of trade diversion. Additionally, historical and cultural ties foster smoother trade relations, while natural trading partners face fewer bureaucratic barriers. The hypothesis has been applied in studies of regional trade agreements (Schiff, 1999; Khadan and Hosein, 2013) and, more recently, by Hosein, Boodram, and Saridakis (2023), who sought to establish trade complementarity as a basis for the Natural Trading Partner Hypothesis in the case of Trinidad and Tobago.

3.2 Empirical Review

Multiple studies (Buigut, 2012; Shinyekwa, 2015; Umulisa, 2020) confirm that EAC reforms have increased Uganda's trade volumes, with particularly strong effects following the establishment of the Customs Union and Common Market. These reforms lowered intra-regional tariffs, harmonised customs procedures, and promoted freer movement of goods, all of which have significantly shaped Uganda's regional trade performance. Despite this progress, the extent to which Uganda's export structure aligns with the import needs of its EAC partners remains an important analytical concern.

Empirical work by Shinyekwa and Othieno (2013) illustrates that Uganda's trade flows have increasingly aligned with regional trading patterns as integration deepened. They observed notable growth in Uganda's exports to EAC partner states and a high degree of complementarity between Uganda's exports and partner-country import needs across several regional blocs. However, their analysis, while foundational, is now dated and did not examine trade intensity or sector-specific complementarity, limiting its ability to identify which product groups offer the highest potential within the EAC.

A parallel study by Spence (2013) examined Uganda's bilateral trade complementarity with Tripartite member states and concluded that Uganda's export structure aligns more closely with the import needs of Eritrea, Egypt, Kenya, and South Africa than vice versa. While providing useful insights into Uganda's external trade potential, Spence's study did not conduct sector-specific analysis and, like earlier work, is now more than a decade old.

Further evidence of Uganda's low complementarity with major trading partners is offered by Ancharaz, Ghisu and Wan (2014), who assessed Uganda's export performance under India's Duty-Free Trade Preference scheme. Uganda's very low complementarity score of 18.0 indicated limited

potential for expanding exports to India. Chakraborty and Sahu (2016) corroborated this finding by showing declining export complementarity between Uganda and India from 2000 to 2013. Although these studies highlight structural weaknesses in Uganda's export basket, they focus exclusively on India and offer limited insights for Uganda's performance within the EAC.

Ng'imor (2020) presents a more pessimistic view of regional complementarity, showing that the EAC's reliance on primary production, limited industrial diversification, and small domestic markets constrain intra-regional trade potential. Many EAC countries export similar raw materials, resulting in a narrow scope for mutual trade enhancement. This observation aligns with arguments that structural similarities between African economies limit the effectiveness of regional trading arrangements unless accompanied by wider economic transformation.

Beyond complementarity, a substantial body of literature has applied gravity-model frameworks to understand the determinants of Uganda's regional trade. Peter (2022) finds that partner-country GDP and population drive Uganda's export performance, while geographical distance remains a persistent barrier. Institutional and historical factors such as shared language and colonial ties also shape trade outcomes, suggesting that Uganda must diversify its trading relationships beyond traditional partners to strengthen long-term competitiveness.

Historical analyses further support these findings. Nuwagaba (2020) shows that the revival of the EAC and subsequent tariff reforms increased Uganda's intra-regional exports and imports and improved GDP–trade ratios. Still, recent assessments (Anami, 2024) indicate that intra-EAC trade remains below potential despite preferential access, pointing to ongoing structural constraints. Earlier gravity-model work by Shinyekwa and Othieno (2013) identified the EAC as predominantly trade creating. However, persistent non-tariff barriers which include documentation burdens, delays, non-harmonised standards, and infrastructure gaps, continue to undermine Uganda's export competitiveness, as detailed by Okumu and Nyankori (2010).

Market-specific opportunities also emerge from recent work. Mugume and Nattabi (2021) report that the DRC's accession to the EAC significantly expands Uganda's export potential, particularly in beverages, iron and steel, and manufactured goods. However, Uganda's limited industrial base restricts

its ability to compete in higher-value product categories dominated by machinery, electronics, and pharmaceuticals.

Welfare analyses similarly highlight both opportunities and constraints. Khorana, Kimbugwe and Perdikis (2007) show that tariff liberalisation has generated both trade creation and diversion, with Uganda's ability to benefit moderated by weak domestic competitiveness. These findings align with the Natural Trading Partner Hypothesis (Krugman, 1991), which emphasises the importance of complementarity and competitive structures in determining the success of regional trade agreements.

Recent evidence from Umulisa (2020) demonstrates that EAC membership increases intra-regional trade by more than 120 percent above predicted levels. However, increased trade intensity does not necessarily translate into strong complementarity, as Uganda continues to rely heavily on markets such as South Sudan and Kenya while underutilising opportunities in Tanzania and Rwanda.

The review of literature reveals that although regional integration has boosted Uganda's trade volumes, trade complementarity with EAC partners remains limited. This is attributed to structural supply constraints, low diversification, persistent non-tariff barriers, and misalignments between Uganda's export structure and regional import demand. Notably, there remains a gap in studies linking Uganda's export performance specifically to sectoral-level complementarity within the EAC. Therefore, this study responds to this gap by assessing Uganda's trade complementarity and comparative advantage at a sectoral level, offering insights into which export categories hold the greatest potential for expansion within the EAC.

4.0 Methodology

4.1 Model specification

This study utilised the Trade Complementarity Index (TCI) and Trade Intensity Index (TII) as analytical methodologies. The Trade Intensity Index was calculated for the period 2013-2023, while the Trade Complementarity Index was computed for the period 2016-2023. The potential for increased trade was derived from the disparity between Uganda's export volumes of merchandise in highly sought-after sectors within the EAC and the corresponding imports of these goods from the rest of the world.

4.2 Data sources

This study utiliseed trade flow data (exports and imports) for Uganda and its regional trading partners. Merchandise exports were classified according to the Harmonized System (HS) of product nomenclature established by the World Customs Organization. Data was collected at the sectoral/chapter level (two-digit HS code), and the dataset primarily focused on Uganda's trade flows to various trading blocs and specifically to each of the 7 EAC partner states (Kenya, South Sudan, DRC, Rwanda, Tanzania, Burundi and Somalia). Additionally, the TCI analysis focused on Uganda's top 5 export merchandise to each of the 7 EAC partner states.

4.3 Analytical Approach

3.3.1 Trade Complementarity Index (TCI) Drysdale (1969). TCI measures how much the export profile of one country and the import profile of another country (region) match. It shows how 'natural trading partners' two countries are, meaning that one country's exports are similar to what the other country imports. The idea is that if the main export products of one country are the same as the main imports of another country, then trade between the two countries will be complementary.

The TCI is calculated as follows.

$$TCI_{ij} = RCA_{xik} \text{ X } RCA_{mjk} \text{ - - - - - - (1)}$$

Where TCIij is the trade complementarity index between country i and country j for commodity k. RCAxik denotes the comparative advantage of country i in commodity k by way of exports, while RCAmjk denotes the disadvantage of country j in commodity k by way of imports (Wani, 2020). A higher TCI value indicates a stronger match between the export and import profiles of two countries. This means that one country's exports closely align with the other country's imports, making them more natural trading partners. Thus, a TCI value of 100 reflects perfect complementarity, where country i's export structure fully matches country j's import structure, whereas values approaching zero indicate very low complementarity and minimal overlap between the two trade profiles.

3.3.2 Trade Intensity. Trade intensity is an assessment of the strength of trade relations between trading partners. Maryam, Banday and Mittal (2018) define it as 'the proportion of two export shares'. Trade Intensity is calculated as follows;

$$TII_{ij} = (X_{ij}/X_{it}) / (X_{wj}/X_{wt}) \quad - \quad - \quad - \quad - \quad - \quad (2)$$

Where TII_{ij} is represents the Trade Intensity Index of country i with country/region j. Here, X_{ij} and X_{wj} represent the export values from country i and the world to country j, respectively, while X_{it} and X_{wt} denote the total exports of country i and the world as a whole. An index value greater (or less) than one signifies that the bilateral trade flow is higher (or lower) than expected, considering the partner country's significance in global trade.

5.0 Results

5.1 Trade Intensity

Table 3: Showing Uganda's Trade Intensity Index values with its EAC partners

	Uganda Trade Intensity Index values with its EAC partners						
Year	**Kenya**	**Tanzania**	**Rwanda**	**DRC**	**South Sudan**	**Burundi**	**Somalia**
2023	146	41	-	59	1,819	492	3
2022	198	68	159	108	2,805	412	4
2021	152	56	3	158	2,144	272	2
2020	127	47	3	163	1,457	305	1
2019	135	40	69	149	1,924	321	1
2018	209	49	446	161	2,670	331	2
2017	200	39	373	198	3,012	453	3
2016	184	57	476	207	2,771	350	6
2015	192	30	669	137	2,599	539	6
2014	135	37	932	-	2,982	524	17
2013	150	30	854	-	2,160	-	26

Source: Authors' computations based on ITC and UN Comtrade data

The TII results for Uganda and its EAC partners (Table 3 and Figure 3) highlights significant trends and changes over time. Trade intensity with key partners has been characterized by fluctuations. Notably, Kenya, South Sudan, and Tanzania emerge as Uganda's most significant trading partners, with South Sudan exhibiting exceptionally high TII values. However, smaller partners such as Rwanda, Burundi, and Somalia show lower and often more inconsistent trade intensity values.

Trade intensity with Kenya has generally remained stable, with notable peaks in 2018 (TII=209) and 2022 (TII=198). Similarly, trade with Tanzania

shows mild fluctuations, with a recovery from a dip in 2015 (TII=30) to peak at TII=68 in 2022, followed by a drop to TII=41 in 2023. Trade with Rwanda demonstrates erratic changes, with highs in 2014 (TII=932) and 2015 (TII=669) followed by a significant decline in subsequent years. By 2021 and 2022, the TII for Rwanda had dropped considerably.

South Sudan consistently exhibits the highest TII values (Figure 4), reflecting strong trade relations. The TII peaked in 2017 (TII=3,012) but has shown a gradual decline to TII=1,819 by 2023. Trade intensity with Burundi has been moderate and relatively stable, peaking in 2015 (TII=539) and recovering to TII=492 in 2023 after a dip in 2020 (TII=305). Meanwhile, the Democratic Republic of Congo (DRC) has shown moderate TII values, with consistent trade engagement over the years. However, trade intensity has gradually declined from 2016 (TII=207) to TII=59 in 2023. Somalia, on the other hand, exhibits minimal trade activity, with negligible TII values throughout the period. In General, Uganda's trade intensity with established partners like Kenya, South Sudan, and Tanzania has shown declining trends, while smaller markets like Rwanda and Burundi display significant volatility.

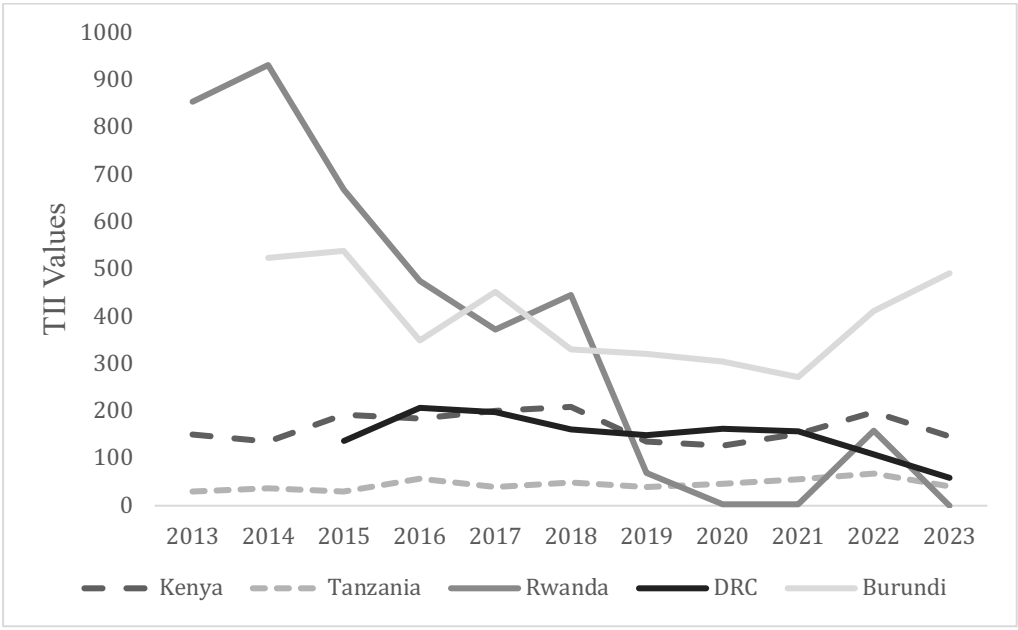

Figure 3: Uganda's Trade Intensity with the EAC (excluding South Sudan)
Source: Authors' computations based on ITC and UN Comtrade data

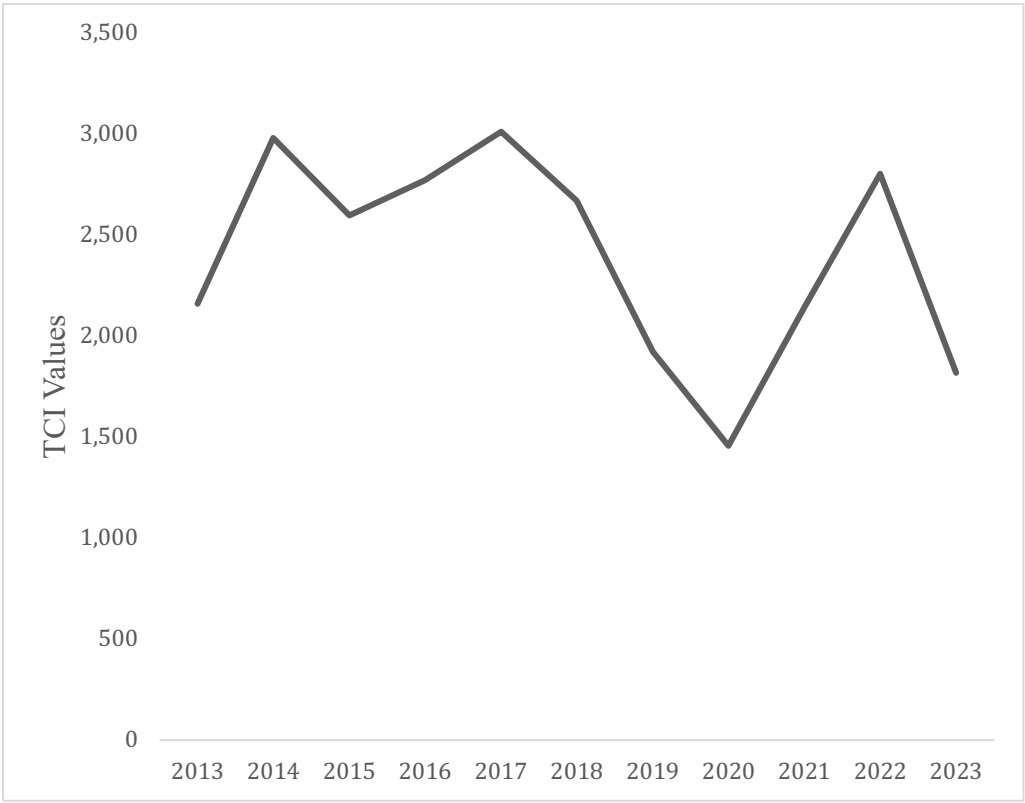

Figure 4: Uganda's Trade Intensity with South Sudan (2013-2023)
Source: Authors' computations based on ITC and UN Comtrade data

5.2 Trade Complementarity Results

5.2.1 Kenya:

Uganda's trade complementarity with Kenya shows varying trends across the five products analyzed (Figure 5). Ceramic products (HS 69) have demonstrated significant growth, increasing from a low value of 0.7 in 2016 to a peak of 18.0 in 2023 (Table 4), indicating a steadily growing alignment between Uganda's exports and Kenya's import demand in this sector. For coffee, tea, maté, and spices (HS 09), the complementarity has fluctuated over the years, peaking at TCI = 58.7 in 2021 before declining to TCI = 27.1 in 2023, suggesting an inconsistent but still notable alignment in this category. In contrast, ores, slag, and ash (HS 26) show minimal complementarity, with values close to zero throughout the years and only slight increases in 2022 (TCI = 0.07) and 2023 (TCI = 0.16), highlighting a negligible alignment in this sector. Cereals (HS 10) exhibit a mixed trend, with a sharp increase from TCI

= 55.5 in 2016 to TCI = 119.6 in 2017, followed by a significant decline to TCI = 14.6 in 2021 before recovering to TCI = 41.3 in 2023. This indicates periodic alignment but also suggests instability in trade complementarity for this product. Dairy produce (HS 04) also shows fluctuations, with complementarity rising from TCI = 2.2 in 2016 to TCI = 8.4 in 2022 before

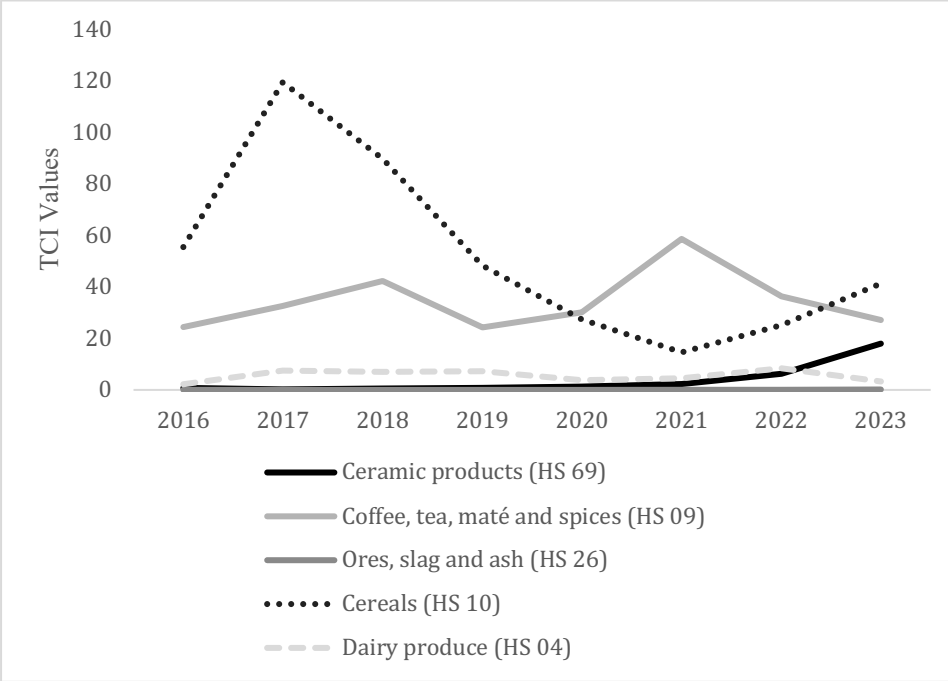

Figure 5: Uganda's TCI with Kenya (2016-2023)
Source: Authors' illustrations based on ITC and UN Comtrade data

Table 4: Showing TCI values for Uganda's export basket to the EAC (2016-2017)

EAC Partner States	Products	2016	2017	2018	2019	2020	2021	2022	2023
Kenya	Ceramic products (HS 69)	0.7	0.2	0.5	0.9	1.3	2.2	6.2	18.0
	Coffee, tea, maté and spices (HS 09)	24.5	32.6	42.3	24.3	30.2	58.7	36.3	27.1
	Ores, slag and ash (HS 26)	0.04	0	0	0	0	0.01	0.07	0.16
	Cereals (HS 10)	55.5	119.6	89.8	48.2	27.5	14.6	25.1	41.3
	Dairy produce (HS 04)	2.2	7.4	6.9	7.2	3.8	4.5	8.4	3.4
Tanzania	Ceramic products (HS 69)	1.1	0.3	0.6	0.9	1.3	1.9	4.7	16.3
	Iron and steel (HS 72)	2.9	1.8	2.9	2.5	2.3	2.4	3.6	3.0
	Cereals (HS 10)	44.0	43.8	6.7	3.7	12.6	6.1	12.2	23.1
	Essential oils and resinoids (HS 33)	1.5	1.0	0.8	0.6	0.9	1.3	1.4	0.9
	Mineral fuels & oils (HS 27)	0.9	1.0	0.7	0.9	0.5	0.5	0.4	0.3
DRC	Animal, vegetable or microbial fats (HS 15)	4.1	5.2	3.1	3.0	1.0	3.4	0.8	0.5
	Beverages, spirits and vinegar (HS 22)	1.1	1.0	0.9	1.0	1.4	1.9	3.2	0.9
	Salt; sulphur; earths and stone (HS 25)	357.7	165.5	218.7	194.4	263.9	346.3	288.1	153.2
	Vehicles other than railway (HS 87)	0.2	0.1	0.1	0.1	0.1	0.4	0.3	0.1
	Iron and steel (HS 72)	1.0	0.6	1.3	1.1	0.9	0.7	1.0	1.0
South Sudan	Products of the milling industry (HS 11)	364.1	614.6	1088.4	909.4	604.3	722.5	1791.1	1068.3
	Iron and steel (HS 72)	1.6	0.7	1.2	1.3	1.5	1.1	2.4	3.3
	Beverages, spirits and vinegar (HS 22)	12.3	13.5	15.7	14.3	18.9	34.3	45.2	37.9
	Salt; sulphur; earths and stone (HS 25)	132.1	54.6	62.0	67.7	104.4	156.4	165.2	108.1

EAC Partner States	Products	2016	2017	2018	2019	2020	2021	2022	2023
	Vehicles other than railway (HS 87)	0.1	0.1	0.3	0.4	0.4	0.6	0.5	0.1
Rwanda	Cereals (HS 10)	77.5	110.4	109.8	41.2	27.6	12.7	23.1	33.2
	Ceramic products (HS 69)	1.1	0.4	1.2	1.9	1.8	3.9	10.1	78.1
	Edible vegetables (HS 07)	14.2	14.4	23.6	6.0	4.6	9.2	23.6	18.8
	Sugars and sugar confectionery (HS 17)	131.0	160.8	178.0	138.1	63.4	163.3	202.0	51.4
	Wood and articles of wood (HS 44)	1.4	0.7	0.9	1.2	0.7	0.6	3.6	7.4
Burundi	Tobacco and manufactured tobacco substitutes (HS 24)	26.4	14.2	21.3	13.9	15.1	16.6	22.8	47.3
	Plastics and articles thereof (HS 39)	0.3	0.2	0.2	0.2	0.1	0.2	0.4	0.6
	Paper and paperboard (HS 48)	1.4	1.0	1.0	1.1	0.9	1.2	1.3	1.2
	Cereals (HS 10)	72.2	132.6	99.6	57.4	23.8	11.9	18.9	17.6
	Products of the milling industry (HS 11)	195.6	305.7	420.5	213.7	164.9	211.5	285.1	458.1

Source: Authors' computations based on ITC and UN Comtrade data

Notes: Somalia was excluded from the analysis because it recently joined the bloc in March 2024 as the eighth partner state. Additionally, Uganda's exports to Somalia are sporadic and of very low value, amounting to only $2.7 million in 2023.

5.2.2 Tanzania:

For Tanzania, the results exhibit diverse trends across the analyzed products. Ceramic products (HS 69) have shown remarkable growth, increasing from 1.1 in 2016 to 16.3 in 2023, indicating a growing alignment between Uganda's exports and Tanzania's import demand in this sector (Figure 6). In contrast, iron and steel (HS 72) display relative stability, with complementarity values hovering between 1.8 and 3.6 over the years, peaking at 3.6 in 2022 but slightly declining to 3.0 in 2023, suggesting moderate and consistent alignment.

Cereals (HS 10) exhibit a fluctuating trend, starting at 44.0 in 2016, sharply dropping to 6.7 in 2018 and 3.7 in 2019, before partially recovering to 23.1 in 2023. This pattern suggests inconsistent but improving alignment in recent years. Essential oils and resinoids (HS 33) have shown a general decline, decreasing from 1.5 in 2016 to 0.9 in 2023, indicating weakening complementarity in this product category. Similarly, mineral fuels and oils (HS 27) reflect a downward trend, starting at 0.9 in 2016 and gradually decreasing to 0.3 in 2023, demonstrating minimal alignment in this sector.

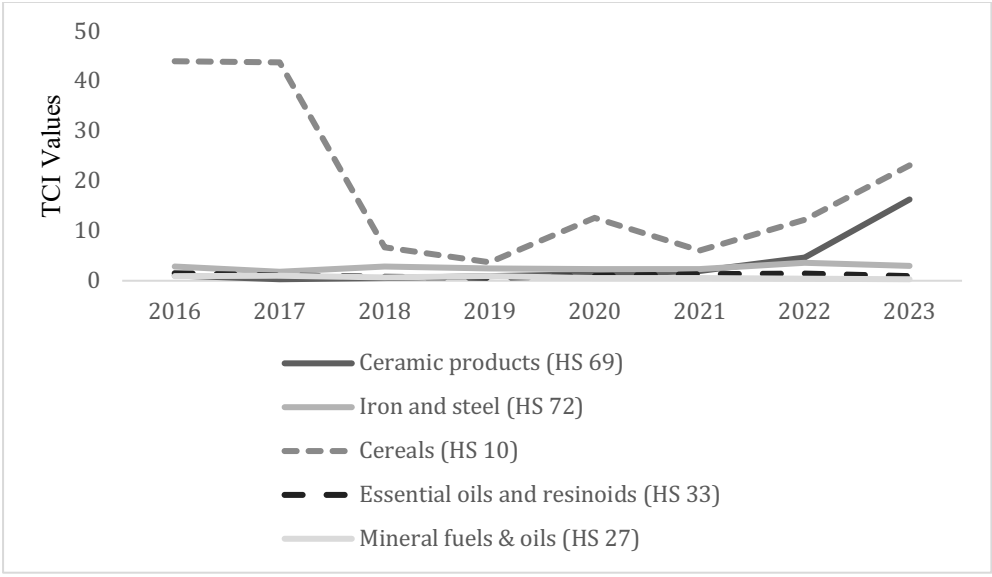

Figure 6: Uganda's TCI with Tanzania (2016-2023)
Source: Authors' illustrations based on ITC and UN Comtrade data

5.2.3 Democratic Republic of Congo

Uganda's trade complementarity with the DRC (Figure 7) shows notable variation across the analyzed products, with the highest complementarity observed in salt, sulphur, earths, and stone (HS 25). This category consistently outperforms others, starting at TCI=357.7 in 2016, with fluctuations over the years, reaching a peak of TCI=346.3 in 2021 before declining to 153.2 in 2023. The data underscores the strong alignment between Uganda's exports and the DRC's import demand in this sector, highlighting its significance as the most promising product for trade expansion. In contrast, other categories exhibit much lower complementarity.

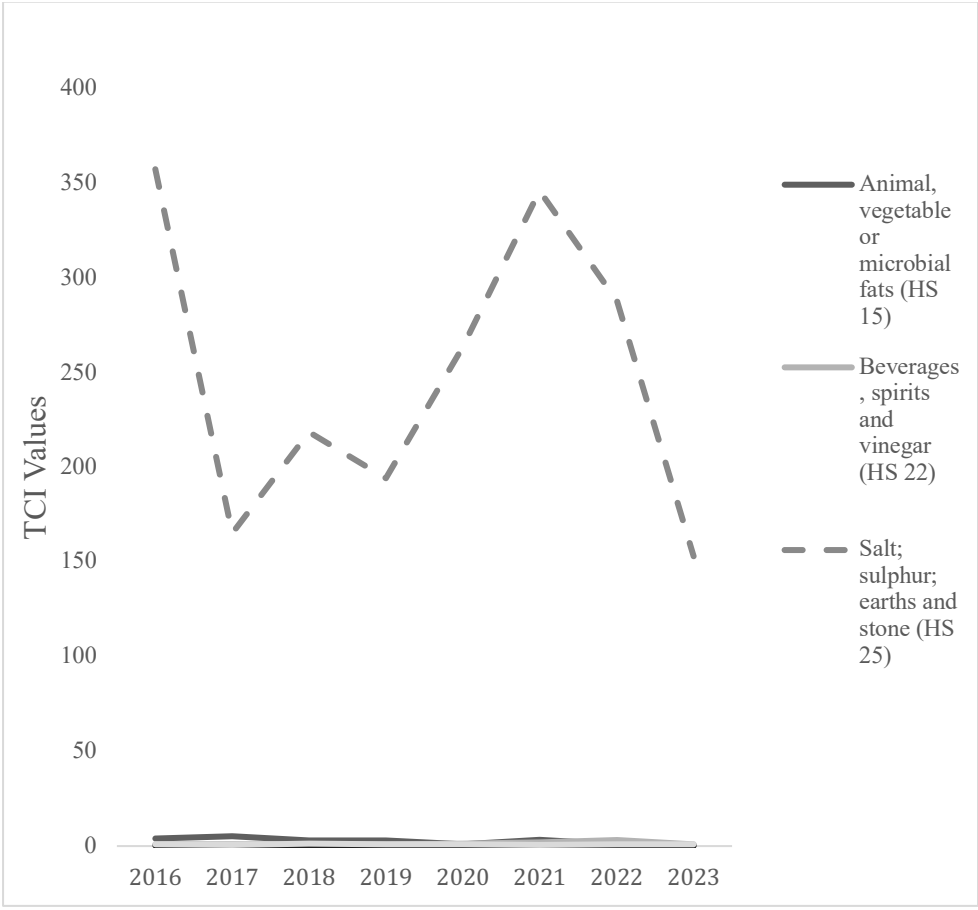

Figure 7: Uganda's TCI with DRC (2016-2023)
Source: Authors' illustrations based on ITC and UN Comtrade data

Animal, vegetable, or microbial fats (HS 15) show a general decline, starting at 4.1 in 2016 and dropping to 0.5 in 2023, indicating weakening alignment. Similarly, beverages, spirits, and vinegar (HS 22) have fluctuated marginally, peaking at 3.2 in 2022 but declining sharply to 0.9 in 2023, reflecting limited and inconsistent complementarity. Vehicles other than railway (HS 87) remain negligible throughout, with values consistently below 0.5, suggesting minimal trade alignment. Iron and steel (HS 72) also display minimal complementarity, remaining largely unchanged, with values hovering around 1.0 over the years.

5.2.4 South Sudan

Uganda's trade complementarity with South Sudan (Figure 8) reveals significant alignment in products of the milling industry (HS 11), which stands out as the most complementary category (figure 6). Complementarity in this category has consistently been high, starting at 364.1 in 2016, peaking at 1,791.1 in 2022, before slightly declining to 1,068.3 in 2023. Other product categories demonstrate varying levels of alignment. Iron and steel (HS 72) show a gradual but modest improvement over the years, increasing from 1.6 in 2016 to 3.3 in 2023, indicating some potential for growth. Beverages, spirits, and vinegar (HS 22) exhibit consistent growth, starting at 12.3 in 2016 and peaking at 45.2 in 2022, before slightly declining to 37.9 in 2023, suggesting increasing but fluctuating trade alignment. Salt, sulphur, earths, and stone (HS 25) shows inconsistent complementarity, with values fluctuating from 132.1 in 2016 to a peak of 165.2 in 2022, followed by a decline to 108.1 in 2023. This reflects periodic alignment and potential for improvement. Conversely, vehicles other than railway (HS 87) remain negligible throughout, with complementarity values peaking at only 0.6 in 2021 before dropping back to 0.1 in 2023, indicating minimal trade alignment in this sector.

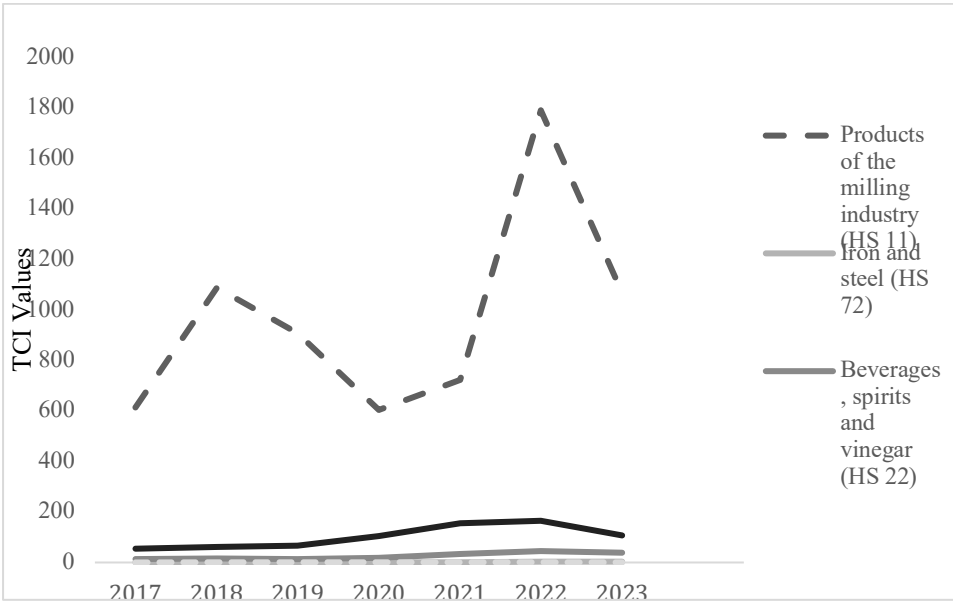

Figure 8: Uganda's TCI with South Sudan (2016-2023)
Source: Authors' illustrations based on ITC and UN Comtrade data

5.2.5 Rwanda

Uganda's trade complementarity with Rwanda (Figure 9) reveals diverse trends across product categories, with ceramic products (HS 69) showing the most significant growth and alignment. Starting at just 1.1 in 2016, complementarity in this category rose dramatically to 78.1 in 2023, reflecting a substantial increase in Uganda's export alignment with Rwanda's import demand for ceramics, highlighting ceramics as a high-potential sector for increased Uganda's trade with Rwanda. In contrast, cereals (HS 10) exhibit a fluctuating but generally declining trend over the years, starting at 77.5 in 2016 and dropping to 12.7 in 2021, before recovering slightly to 33.2 in 2023, Indicating periodic opportunities for alignment but also points to inconsistencies. Edible vegetables (HS 07) also show a mixed trend, peaking at 23.6 in 2018 and again in 2022 but declining to 18.8 in 2023, reflecting some alignment but limited growth potential. Sugars and sugar confectionery (HS 17) experienced significant volatility, starting at 131.0 in 2016, peaking at 202.0 in 2022, and then declining sharply to 51.4 in 2023, suggesting potential opportunities in this sector. Lastly, wood and articles of wood (HS 44) show minimal complementarity, with values consistently low from 2016

to 2020, but a modest improvement to 7.4 in 2023 indicates emerging potential.

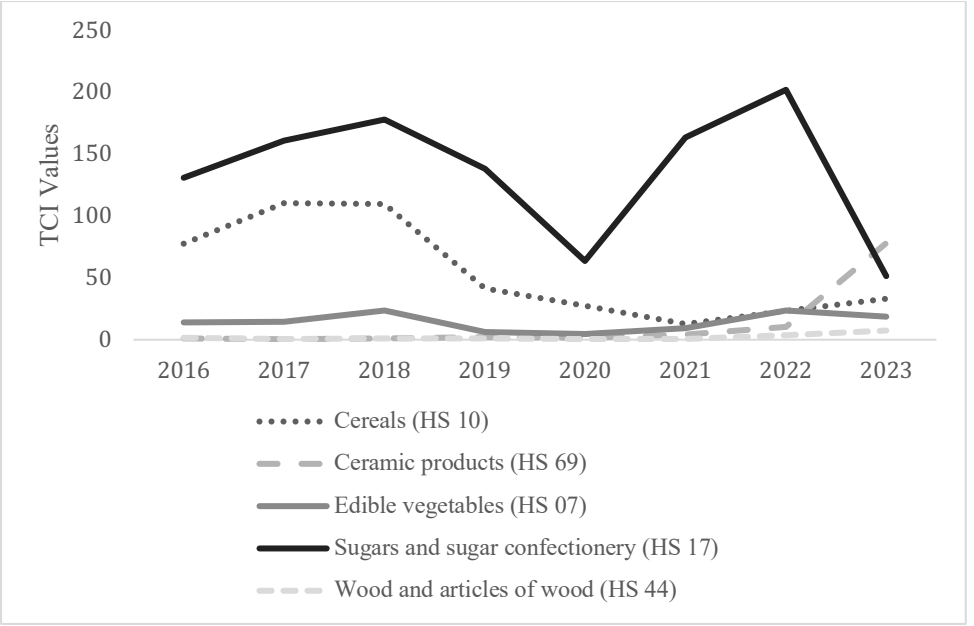

Figure 9: Uganda's TCI with Rwanda (2016-2023)
Source: Authors' illustrations based on ITC and UN Comtrade data

5.2.6 Burundi

Uganda's trade complementarity with Burundi (Figure 10) shows varying trends across product categories, with products of the milling industry (HS 11) demonstrating the greatest alignment. This category shows consistently strong complementarity, starting at 195.6 in 2016 and peaking at 458.1 in 2023, suggesting a high-potential sector for Uganda's exports to Burundi. In contrast, tobacco and manufactured tobacco substitutes (HS 24) also exhibit notable growth, rising from TCI = 26.4 in 2016 to 47.3 in 2023, indicating increasing alignment with Burundi's import needs in this sector. Cereals (HS 10), however, show a declining trend overall, starting at 72.2 in 2016, peaking at 132.6 in 2017, and then gradually dropping to 17.6 in 2023, reflecting reduced complementarity and potential challenges in this sector. Other categories, such as plastics and articles thereof (HS 39) and paper and paperboard (HS 48), demonstrate consistently low complementarity. Plastics

increased slightly from 0.3 in 2016 to 0.6 in 2023, while paper and paperboard remained relatively flat, fluctuating between 1.0 and 1.4 over the years, indicating minimal alignment in these categories.

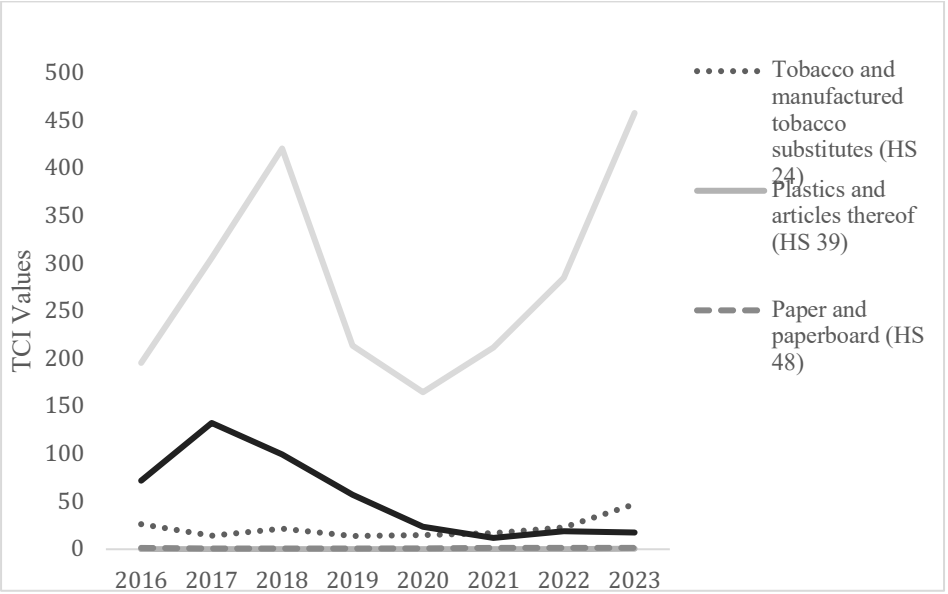

Figure 10: Uganda's TCI with Burundi (2016-2023)
Source: Authors' illustrations based on ITC and UN Comtrade data

5.3 The existing potential for increased trade between Uganda & the EAC

Uganda's share of the EAC's total imports from the world remains low and almost negligible in several lucrative sectors, as shown in Figure 11. These include Prepared Foods (9.5%), Plastics and Rubber Products (2.0%), Vegetable Products (12.8%), Animal and Vegetable Oils (5.3%), Textiles and Textile Articles (0.9%), and Chemical Products (1.5%). This highlights the potential for Uganda to expand its exports to the EAC, particularly given its preferential market access as a member state of the EAC. For instance, in the lucrative Prepared Foods sector, which recorded an import value of $3.5 billion in 2023, 49.1% ($1.7 billion) of these products were sourced from non-EAC partner states (India, Brazil, Türkiye, France, Egypt, South Africa and Zambia). Within this category, sugar and sugar confectionery products dominated, accounting for $1.2 billion of imports in 2023 (UN Comtrade, 2024). Similarly, in 2023, the EAC imported Vegetable Products (HS 6-14) worth $4.1 billion, of which Uganda contributed only $534 million. A significant proportion (40%) of these imports was sourced from five non-EAC

partner states: the Russian Federation ($980 million), Pakistan ($230 million), South Africa ($180 million), Ethiopia ($146 million), and the United States of America ($145 million). It is evident from the results that there is significant untapped potential for Uganda to increase its exports to the EAC, as its current contribution remains low across key sectors, despite the region's high import demand and Uganda's preferential access as an EAC member state.

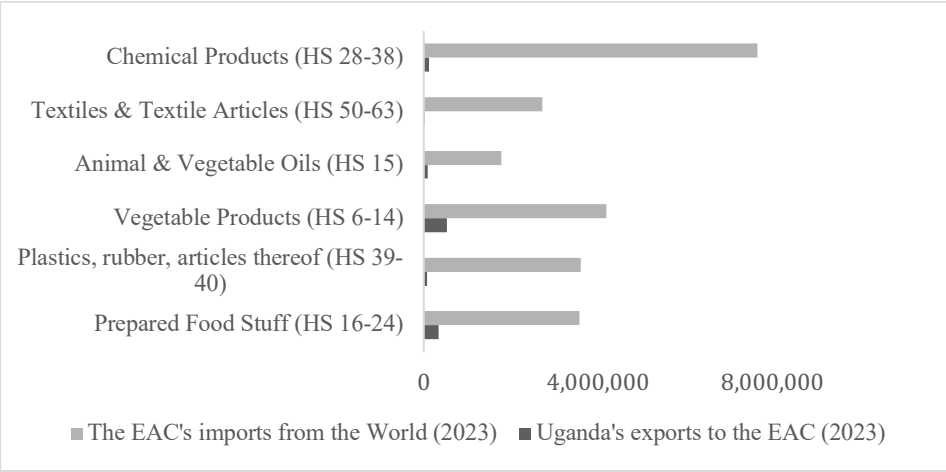

Figure 11: Uganda's exports to the EAC Vs The EAC's imports from the World 2023
Source: Authors' illustrations based on ITC and UN Comtrade data

6. Discussion

The findings of this study reinforce and extend existing evidence on Uganda's trade dynamics within the EAC. Consistent with earlier work by Shinyekwa (2015) and Umulisa (2020), the results confirm that regional integration has expanded Uganda's trade volumes. However, the results also demonstrate an important insight: increased trade activity does not automatically translate into high trade complementarity. Uganda's strong trade intensity with South Sudan, for example, appears to arise largely from historical and logistical ties rather than from structural alignment between Uganda's export basket and partner-country import needs.

The sector-specific Trade Complementarity Index results provide new insights that earlier aggregated studies such as those by Shinyekwa and Othieno (2013) and Spence (2013) were unable to capture. Although existing literature generally portrays Uganda's complementarity as weak, this study identifies specific export clusters with strong alignment, including milling

products (HS 11) with South Sudan and Burundi, ceramic products (HS 69) with Rwanda and Tanzania, and salt and mineral products (HS 25) with the DRC. These findings challenge Ng'imor's (2020) argument that EAC countries are too structurally similar to generate meaningful complementarity, and instead show that emerging manufacturing niches in Uganda are beginning to match regional demand.

At the same time, the study confirms persistent structural limitations. Uganda's low complementarity in high-demand sectors such as chemicals, plastics, textiles and vegetable products reflects its limited industrial capacity and slow diversification, consistent with the findings of Ancharaz et al. (2014) and Chakraborty and Sahu (2016). Uganda continues to export what it is able to produce, rather than what the region demands, which results in market shares that often fall below 10 percent despite substantial import demand across the EAC. This supports arguments by Si Tou (2021) and Fofack (2020) that African regional trade is constrained more by supply limitations than by a lack of market opportunity.

The results also suggest that the Natural Trading Partner Hypothesis (Krugman, 1991) holds only partially. Although proximity and integration tend to increase trade intensity, they do not guarantee high complementarity. Uganda's declining intensity with Kenya and Tanzania aligns with concerns raised by Anami (2024) regarding implementation gaps in EAC protocols and rising competition from extra-regional suppliers. Persistent non-tariff barriers, previously highlighted by Okumu and Nyankori (2010), further limit Uganda's ability to deepen its regional market presence. The findings show that complementarity varies widely across both trading partners and product groups, and Uganda's ability to benefit from the EAC depends on targeted industrial upgrading, enhanced supply capacity and strategic export diversification.

7. Conclusion, recommendations and limitations

7.1 Conclusion

This study sought out to evaluate the extent to which Uganda's export profile aligns with the import needs of its EAC partner states and to identify opportunities for increased trade within the region. The findings reveal that Uganda's trade complementarity with its EAC partners remains relatively low across several key sectors, such as prepared foodstuffs, textiles, and chemicals, despite the significant opportunities afforded by regional integration. However, sectors like ceramics, milling industry products, and

salt exhibit promising potential for alignment and expansion. Additionally, trade intensity trends show a strong reliance on traditional markets like South Sudan and Kenya, while newer markets like Tanzania and Rwanda display fluctuating and underexploited trade opportunities. Lastly, Uganda's current contribution to the EAC's total imports is low across several lucrative sectors despite the region's high import demand and Uganda's preferential access as an EAC member state.

7.2 Policy implications

7.2.1 Policy

This study underscores the critical importance of aligning a country's export basket with the import basket of its target markets. The findings can inform policymakers in designing and implementing strategies to diversify Uganda's export base, emphasizing high-potential sectors such as prepared foods, vegetable products, and textiles, which align with regional demand trends. Furthermore, authorities should provide targeted support to sectors with high complementarity potential, such as ceramics and milling industry products, to enhance their competitiveness.

7.2.2 Business practitioners

The study's findings have significant potential for enhancing Uganda's trade across various sectors within the EAC. For instance, Uganda currently supplies only 9.5% of the EAC's demand for Prepared Foodstuffs. To capitalize on these opportunities, it is crucial for business practitioners to leverage market intelligence more effectively, identifying specific product-level opportunities within the EAC, focusing on sectors with high import demand and minimal competition from other member states. Furthermore, Ugandan firms should invest in capacity-building initiatives to improve production processes and ensure compliance with international standards.

7.3 Study Limitations

The study relied on secondary trade data from the International Trade Centre and UN Comtrade, which may not fully account for informal trade flows., an important aspect of Uganda's regional trade dynamics. Additionally, this study relied on quantitative trade data, which does not capture the perspectives of Ugandan exporters or business practitioners on the factors contributing to the misalignment between Uganda's export profile and the EAC's import demand. Future research could explore qualitative methods so as to provide a much richer insight.

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Appendices

Appendix A1: Table showing the potential for trade between Uganda and the EAC 2023

		Uganda's exports to the EAC (2023)	The EAC's imports from the World (2023)	Uganda's exports to the World (2023)
		Imported value in US Dollar thousand	Imported value value in US Dollar thousand	Imported value value in US Dollar thousand
All products		2,207,218	78,550,017	6,305,023
1.	Prepared Food Stuff (HS 16-24)	337,740	3,565,384	552,508
2.	Plastics, rubber, articles thereof (HS 39-40)	70,888	3,600,114	80,460
3.	Vegetable Products (HS 6-14)	534,032	4,184,082	1,655,398
4.	Animal & Vegetable Oils (HS 15)	94,071	1,781,185	105,821
5.	Textiles & Textile Articles (HS 50-63)	24,289	2,724,017	56,676
6.	Chemical Products (HS 28-38)	112,631	7,653,980	176,424

Source: ITC / UN COMTRADE statistics