

## Analysis of Burundi's Food Imports from EAC Countries

Ndayisaba Jean Claude, Lagat K. Job and Kiprop K. Symon

E-mail : ndiclaude3@gmail.com; jlagats@gmail.com; sikiprop@yahoo.com

### Keywords:

International trade, food trade; intensity of trade, regional economic communities.

**Received:** 16 April 2020;

**Revised:** 20 April 2020;

**Accepted:** 17 June 2020;

**Publication:** 31 July 2020

**Abstract:** This study analyzed Burundi's imports from EAC countries for selected food commodity. The study was carried out using an intensity of trade approach. More specifically, the study critically analyzed the intensity of Burundi's food imports from Kenya, Uganda, Tanzania and Rwanda. In this study which is limited in time (from 2003 to 2018), only four food commodities namely maize, rice, sugar and wheat were taken into account. The results were depicted using histograms. Findings revealed that among other EAC countries, Burundi intensively imported maize, rice and wheat from Uganda followed by Tanzania. However, an exception was noted for the case of sugar: findings indicated that Burundi intensively imported sugar from Kenya followed by Uganda. Lastly, findings indicated that the intensity of Burundi's imports from Rwanda in the aforementioned selected food commodities remained relatively low when compared to that of other EAC partner countries.

### Introduction

Food trade highly contributes to the improvement of citizens' welfare. Through trade, food commodities are exchanged and this guarantees a sustainable food supply on countries' local markets. Referring to trade, Salvatore (2014) indicates that we live a globalized world where tastes are converging and both goods and services we usually use are provided by foreigners. Thus, trade's existence is inevitable in modern open economies. Empirical studies highlight the irreplaceable role of trade in the development of nations: trade increase the GDP of nations and hence enhance a sustainable development across trading partners. According to Marshall (1959), the causes which determine the economic progress of nations belong to the study of international trade. Referring to the nexus between trade and economic growth, Robertson (1938) famously described exports as an engine of growth while Minford et al. (1995) hailed foreign trade as an elixir of economic growth.

Thus, countries across the world try to set mechanisms and other tools in order to facilitate exchange of goods and services between them. Regional Economic Communities (RECs) have been seen as a tool that can accelerate the pace of trade between partner States. Ardiyanti (2015) indicates that regional trade agreements have covered more than half of international trade throughout the world since early 1990s.

Salvatore (2014) highlights that a REC refers to a commercial policy of discriminatively reducing or eliminating trade barriers only among nations joined together, it ranges from preferential trade arrangements to free trade areas, customs unions, common markets and economic unions. Hence, RECs open a very large space for trade to happen provided that trade barriers are reduced or completely eliminated to trigger an intensive exchange of goods and services across countries. It is in this context that African countries established commercial links through RECs with an ultimate goal of boosting trade. The United Nations Conference on Trade and Development (UNCTAD) (2018) indicates that African Union (AU) recognizes 8 RECs which form the pillars of African economic community. Among the eight RECs, one can mention the Economic Community of West African States (ECOWAS), the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA), the Economic Community of Central African States (ECCAS), the Intergovernmental Authority on Development (IGAD) and the East African Community (EAC) among others.

The EAC was originally founded in 1967 but collapsed in 1997 (Karugia *et al.* 2009). It was then revived in 2000 by three countries namely Kenya, Uganda and Tanzania (Kasaija, 2004). The treaty that established the EAC was signed on 30 November, 1999 and entered into force on 7 July, 2000 following its ratification by the three original partner states (EAC, 2016). Rwanda and Burundi acceded to the EAC treaty on 18 June, 2007 and became full members of the community on 1 July, 2007 (Gaalya *et al.*, 2017). South Sudan acceded to the treaty on 15 April, 2016 and became an effective member on 15 August, 2016 (UNCTAD, 2018).

The common feature of EAC countries is that of food insecurity. EAC countries are often struck by food insecurity and trade constitutes one of the key ways to reduce the level of food insecurity across EAC countries. Exchange of food commodities among EAC countries enhances food availability and hence contributes to food security among EAC citizens. Provided the role of trade in reducing food insecurity in EAC countries, it is more relevant to carry out studies focused on food trade across EAC countries.

### **Trade within EAC countries**

The value of intra-EAC trade was US\$ 5,805.6 million and US\$ 5,632.9 million respectively in 2013 and 2014. Intra-EAC trade performance varies over time and by country. Kenya continues to dominate intra-EAC trade, accounting for about 32.8% of total intra-EAC trade while Tanzania and Uganda respectively accounted for 26.4 % and 23.6% of the total value of intra-EAC trade (EAC, 2014).

The mostly traded goods include agricultural commodities such as coffee, tea, tobacco, cotton, rice, maize, sugar, wheat flour and manufactured goods namely,

cement, petroleum products, textiles, sugar, confectionery, beer, salt, vegetable fats and oils, iron and steel, paper, plastics and pharmaceutical products (EAC, 2014).

Concerning food trade, Levard and Louis (2014) argued that intra-EAC trade contributes towards sustained food availability. Looking at Burundi, the third quarterly statistics report of Burundi revenue authority (OBR) points out that Burundi's imports from EAC represented 21.8% of the value of total imports. Compared to 2016, Burundi's imports from Tanzania increased by 58% while a decrease of imports from Kenya, Rwanda and Uganda was observed at a level of 7, 0%, 19, 4% and 4, 8% respectively according to the mentioned report. Exports to EAC countries were estimated at 5.3% of the total value of Burundi exports (OBR, 2017). According to a report of Burundi central bank, BRB (2017), trade between Burundi and other EAC partner states fell over 2016-2017, from 6.9% to 5.1% with Kenya, 6.7% to 5.1% with Uganda, 2.2% to 1.1% with Rwanda and from 7.2% to 6.6% with Tanzania. In regard to food production, Burundi was self-sufficient in food production before 1990's according to Ndayitwayeko *et al.* (2014); however the civil war which struck the country from 1993 to 2005 reduced the output from all sectors, agriculture included. Since then, Burundi relies on imports to offset the deficit in food needs.

This study aimed at investigating on how Burundi intensively imported maize, rice, sugar and wheat from EAC countries from 2003 to 2018. In Burundi, few studies related to food trade were carried out so far. Studies conducted are more general: they neither focused on bilateral trade flows nor have been focused at commodity level. Furthermore, the intensity of trade approach has not been used so far. Therefore, this study is meant to fulfil that gap left by studies done. Findings from this study firstly provide relevant information to policy makers in both Burundi and Tanzania. Such information might be useful while addressing issues related to rice demand and/or supply across these countries.

### **Materials and Methods**

This study is limited in time, from 2003 to 2018. The reason behind that choice was due to the availability of data. In addition, 2003 corresponds to the resume of regular economic activities in Burundi after more than a decade of political instability while 2018 corresponds to the first decade since Burundi integrated the EAC. Moreover, this study was carried out on four selected food commodities namely maize, rice, sugar and wheat.

The reason behind the selection of these commodities is threefold: they play a major role in a typical Burundian diet; they are easily tradable and are generally grown in all EAC countries. Lastly, this study did not take into account South Sudan, for a reason that it joined the EAC recently, (in 2016).

Concerning the theoretical framework, this study was grounded by the country similarity theory. The theory of country similarity was developed by Steffan Linder in 1961 (Neculita and Sarpe, 2018). The theory stresses that a nation exports those manufactured products for which a large domestic market exists. In other words, the theory indicates that trade takes place between countries with the same level of development. The similarity can be seen in the aspects of location, culture, political & economic interests and natural resources among other aspects. The relevance of this theory lies in the fact that all countries involved in this study share many features which make them to be similar in a way or another.

The trade intensity technique used in this study was developed by Kojima in 1964 (Ambrose and Sundar, 2014). Mikic and Gilbert (2007) define the intensity of trade as the ratio of two export shares. The numerator is the share of the destination of interest in the total exports. The denominator is the share of the destination of interest in the exports of the world as a whole. In the context of this study, the world was substituted by the EAC provided that this study is limited within the EAC borders. Ambrose and Sundar (2014) argued that the intensity of trade does not suffer from any size bias and one can compare the statistic across regions and over time.

Provided that there are many empirical studies done using the intensity of trade, this study adopted Ambrose and Sundar (2014) for a reason that they used a recently improved formula to compute the intensity of trade. Therefore the expression of intensity of imports, between Burundi and each of EAC countries was given by the following equation:

$$MTI_{jt}^k = \frac{\left[ \frac{M_{jt}^k}{M_{it}^k} \right]}{\left[ \frac{X_{jt}}{X_{EACt} - X_{it}} \right]} * 100 \quad (1)$$

Where:

$i$  and  $j$  respectively refer to Burundi and one of EAC countries;  $k$  refers to either maize, rice, sugar or wheat;  $t$  refers to time.

$MTI_{jt}^k$  denotes the intensity of  $i$ 's  $k$  imports from  $j$  at time  $t$ .

$M_{jt}^k$  denotes  $i$ 's  $k$  imports (in values) from  $j$  at time  $t$ .

$M_{it}^k$  denotes total  $i$ 's  $k$  imports (in values) at time  $t$ .

$X_{jt}$  denotes total  $j$ 's exports (in values) to EAC at time  $t$ .

$X_{EACt}$  denotes total EAC export (in values) at time  $t$ .

$X_{it}$  denotes total  $i$ 's exports (in values) at time  $t$ .

In the above equation,  $X_{it}$  is subtracted from  $X_{EACt}$  for a reason that a country cannot export goods to itself. The only share it can meaningfully have in total world trade is a share in the imports of all other countries (Peter and Ross, 1982). The value of trade intensity ranges between 0 to  $+\infty$  (Mikic and John, 2007). Theoretically, an index of more (less) than 1 (or 100 if expressed in percentage) indicates a bilateral trade flow that is larger (smaller) than expected, given the partner country's importance in world trade.

**Data**

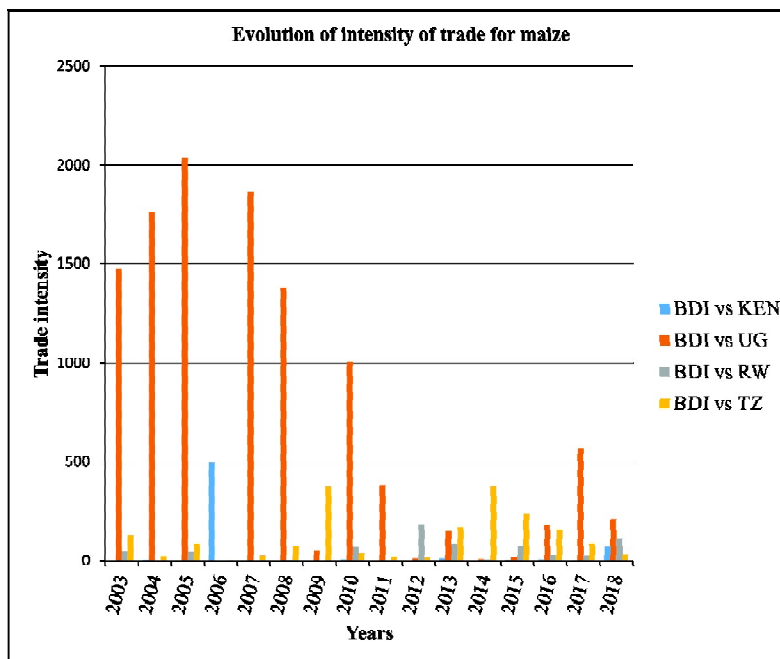
The data were sourced from UNCOMTRADE (United Nations Commodity Trade), UNTRAINS (United Nations Trade Analysis and Information System), WITS (World Integrated Trade Solution) and Trade map.

**Results**

Figure 1 to Figure 4 depict the results found concerning the intensity of Burundi's imports for maize, rice, sugar and wheat.

**Maize**

Figure 1: Intensity of Burundi's maize imports from EAC countries.

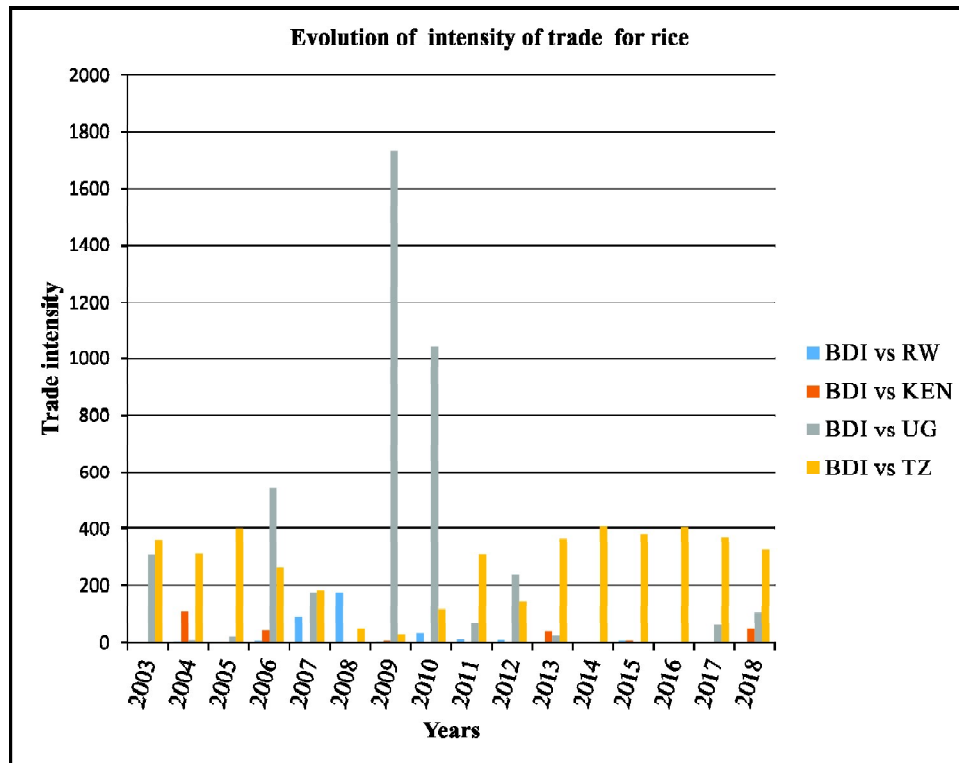


Legend: BDI: Burundi; KEN: Kenya; TZ: Tanzania; RW: Rwanda; UG: Uganda.

Figure 1 reveals that Burundi intensively imports maize from Uganda followed by Tanzania and Kenya but this trend has declined over time probably due to the increase of domestic production of maize as a result of government subsidies in fertilizers given to farmers.

## Rice

Figure 2: Intensity of Burundi's rice imports from EAC countries.



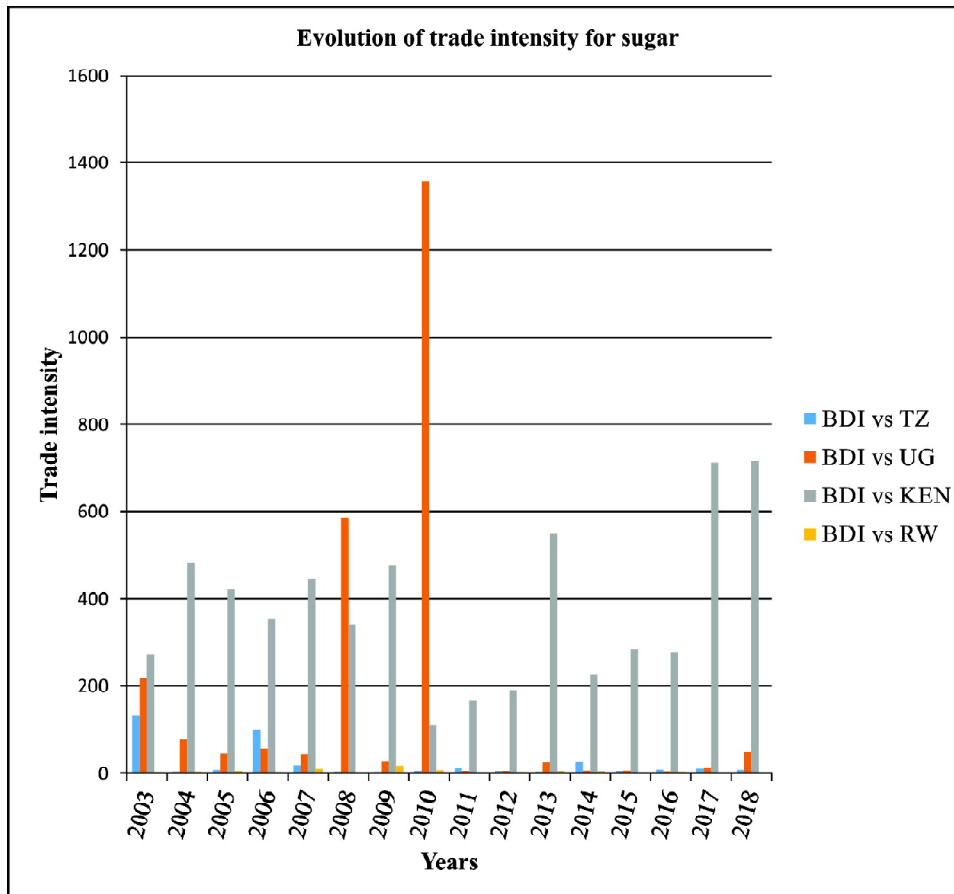
Legend: BDI: Burundi; KEN: Kenya; TZ: Tanzania; RW: Rwanda; UG: Uganda.

The intensity of rice imports is shown in Figure 2. Burundi intensively imported rice from Uganda, particularly in year 2009 and 2010. However, the intensity of rice imports from Tanzania has remained relatively constant over the years. Rice imports from other EAC countries such as Kenya and Rwanda are not too intensive. The intensity of trade between Burundi and Rwanda is almost zero from year 2015 due to deterioration of diplomatic relationship between the two countries

since that year. This reduced the intensity of trade between the two nations in all goods and services, food commodities included. Therefore, one can note that having good diplomatic relationship between countries is key to favor and enhance trade.

### Sugar

Figure 3: Intensity Burundi's sugar imports from EAC countries.

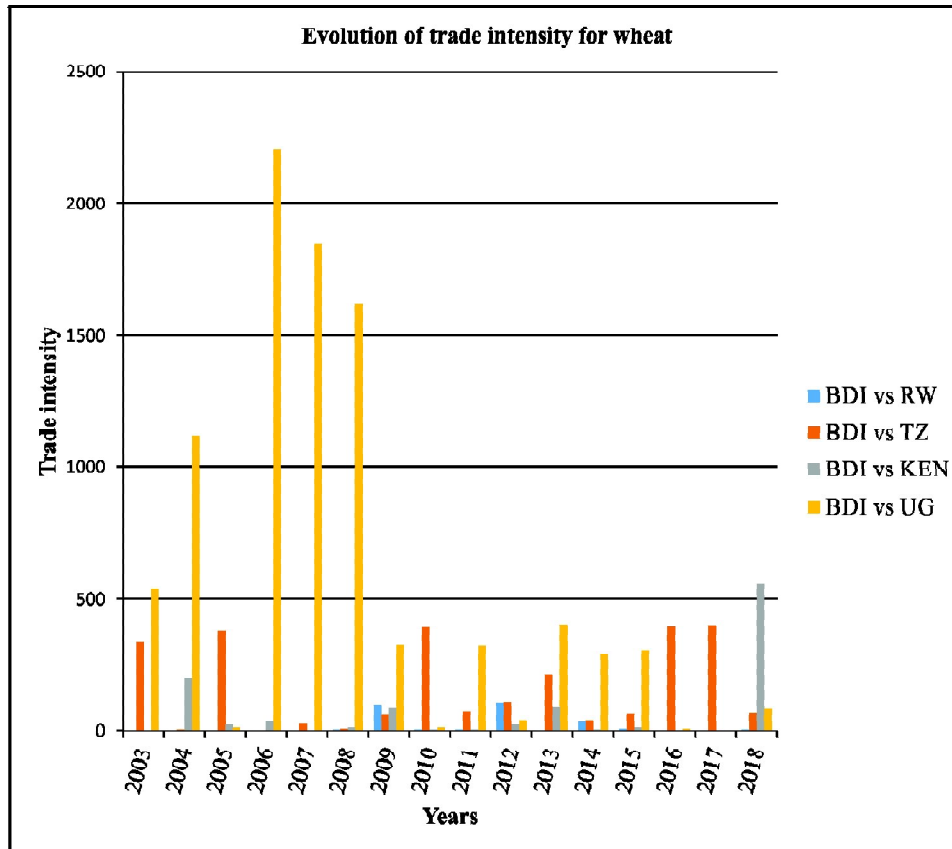


Legend: BDI: Burundi; KEN: Kenya; TZ: Tanzania; RW: Rwanda; UG: Uganda.

Although Burundi imported sugar from Uganda, the intensity is very low except in occasional circumstances like in 2008 and 2010. Burundi intensively imported sugar from Kenya (Figure 3) and it is on an upward trend. For the case of Tanzania and Rwanda, the results reveal that Burundi's intensity of imports in sugar is too small with a downward trend (Figure 3).

## Wheat

Figure 4: Intensity of Burundi's wheat imports from EAC countries.



Legend: BDI: Burundi; KEN: Kenya; TZ: Tanzania; RW: Rwanda; UG: Uganda.

The results in Figure 4 reveal that the intensity of wheat imports is relatively high for the case of imports from Uganda although it declined since 2008. It is likely that there were bilateral agreements on wheat between Uganda and Burundi before the later joined EAC. The effects of membership can be visible where the intensity with the other member states rose.

## Conclusion and recommendations

This study analysed the intensity of Burundi's imports from EAC for four selected food commodities namely maize, rice, sugar and wheat. The findings allowed concluding that Burundi intensively imports maize, rice and wheat from Uganda followed by Tanzania.



Concerning sugar, the findings indicated that Burundi intensively imports sugar from Kenya followed by Uganda. Amid other EAC countries, the findings indicated that the intensity of Burundi's food imports from Rwanda is relatively low when compared to that of other EAC countries. Therefore, the analysis of the intensity of trade done in this study provided useful information on which country Burundi trades intensively with and for which commodity among the four selected food commodities involved in this study. Then, policy makers should formulate policies and take related actions to improve the intensity of food trade between Burundi and other EAC countries to address issues of food supply and demand in these countries.

### ***Acknowledgement***

The authors of this paper would like to deeply thank the Centre of Excellence in Sustainable Agriculture and Agribusiness Management (CESAAM) of Egerton University for having financially supported this study.

### ***Conflict of interest***

Authors declare no conflict of interest.

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