

# TRADE AND REVEALED COMPARATIVE ADVANTAGE MEASURES: A CASE OF MAIN EXPORT CROPS OF BENIN REPUBLIC<sup>1</sup>

**Mouinatou ALIDOU\***

\* *Department of Agricultural Economics, Akdeniz University, S. Yazar, TURKEY; e-mail:  
almou3@gmail.com*

**R. Figen CEYLAN\*\***

\*\* *Department of Agricultural Economics, Akdeniz University, TURKEY*

**Eda ILBASMIS\*\*\***

\*\*\* *Department of Agricultural Economics, Akdeniz University, TURKEY*

**Abstract:** International trade is one of the key factors of macroeconomic prosperity for any country. It is generally recognized that trade is essential for growth and that growth is critical for poverty reduction. In many nations in Africa where agriculture constitutes the largest portion of the economy and agricultural commodities figure prominently among the goods traded, international agricultural trade has been a notable motor of development. Agricultural trade is a generator of income and welfare for the millions of people who are directly or indirectly involved in it. Comparative advantage, one of the most celebrated concept/theory of economics, has globally dominated the field of international trade especially agricultural trade not only in academics but also in economic/development policy circles. Benin is one of the developing Sub-Saharan countries, of which the economic welfare depends essentially on agricultural trade. Agriculture contributes around 35 % in the country's GDP and 80 % in the income generated by exports. By analysing the secondary cashew and cotton exports data retrieved from 1964 to 2014, three indices are calculated: the Revealed Comparative Advantage (RCA), the Revealed Competitiveness (RC) and Comparative Export Performance (CEP). In doing so, this study aimed to analyse the competitiveness of Benin's two main agricultural export commodities that are cotton and cashew. Accordingly, the position of Benin will be compared with its neighbour countries competitive markets in West Africa, where selected crops export play a huge role in their economy. Nigeria for cashew and Burkina-Faso for cotton will be selected for data analysing watching the last 50 years (1964-2014). The analysis is conducted respecting data availability of the competing countries. This comparison of Benin and its major partners would provide an assessment of export specialization of Benin as well.

**Key words:** Agricultural Trade, Comparative Advantage, Revealed Competitiveness, Comparative Export Performance, Benin, Nigeria, Burkina Faso

**JEL Codes:** F1,F16

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## 1. INTRODUCTION

International trade is one of the key factors of macroeconomic prosperity for any country. Today with the increasing force of globalisation, international trade has become very complex with multi-billion transactions taking place every year. Agriculture is an important sector for different reasons across industrialized, developing, and least developed countries. As noted by (Pingali, 2010), agriculture is the primary engine of economic growth for developing, and least developed countries; for emerging economies, the agricultural sector requires government efforts to sustain productivity gains; for industrialized countries, it is important to promote agriculture's multifunctional roles such as rural amenities and ecosystem services. As such, agricultural trade has been one of the most contentious issues in international economic relations. In many nations in Africa where agriculture constitutes the largest portion of the economy and agricultural commodities figure prominently among the goods traded, international agricultural trade has been a notable motor of development as well.

Located on West African coast, Benin, one of Africa's strongest democracies, is a country of undulating plains and low mountain ranges, bordering Nigeria in the east, Niger in the north, Togo in the west and Burkina Faso in the northwest (figure 1), with a total surface area of 112, 622 square kilometres. Benin's total population is estimated at 11.308.996 in 2016 (Anonymous, 2016), composed of over 50, 7 percent women. It is a young population as well, with 17.4 percent of it children under 5 years old. 42 % urbanized, the population is mostly concentrated in the southern portion of the country (Anonymous, 2014). The proportion of the population living in poverty is about 35.2 %, with more rural households in poverty (38.4%) than urban households (29.8%). 36 % of households depend solely upon agricultural (crop) production for income, and another 30 % depend on crop production, livestock or fishing for income.

Benin's economy is mainly based on agriculture. Benin has considerable unexploited agricultural potential: Only 20 % of arable land is cultivated and crop yields have considerable margins for increase. Despite this, according to the MAEP (2015), the agricultural sector in Benin contributes on average 32.7% to the GDP, 75% to the export earnings, 15% to government revenues. Agriculture represents 82.4 % of employment and where 38.9% of employed individuals still live in poverty (INSAE 2014). According to the Observatory of Economic Complexity, Benin exports 72 products with revealed comparative advantage (meaning that its share of global exports is larger than what would be expected from the size of its export economy and from the size of a product's global market).

Trade is important to Benin's economy since the value of exports and imports taken together equals 63 percent of GDP (Anonymous, 2017). In 2015 Benin exported \$913Million, making it the 149<sup>th</sup> largest exporter in the world (Anonymous, 2015a). During the last five years the exports of Benin have decreased at an annualized rate of - 7.9 %, from \$ 1.35 Billion in 2010 to \$ 913 Million in 2015. In 2015, Benin exported \$ 913 Million and imported \$ 5.61 Billion, resulting in a negative trade balance of \$ 4.7 Billion. In 2015 the GDP of Benin was \$8.29 Billion and its GDP per capita was \$ 2.06 Thousand (Anonymous, 2015a). Nevertheless, the agricultural trade balance is heavily in deficit. In 2008-2012, agricultural exports represented only 44% of food imports

(MAEP, 2013). Development of the agricultural export sector is a priority for Benin, which aims to increase by 50% the volume of agricultural exports by 2015 (PSRSA / NIPA). Within the agricultural sector, cotton plays a dominant role. Cotton is the principal cash crop and accounts for 70 % (Anonymous, 2014) of export earnings. Cashew constitutes the second largest source of foreign revenues after cotton. Cashews account for 8 % of national export revenues and 24.87 % of agricultural export revenues (Tandjiekpon, 2010).

Cotton and cashew play a huge role in African countries. Cotton exports however emit significant revenue for national economies of many West African countries. In 2001, revenues of Burkina Faso's exports accounted for 51.4%; 37.6% in Benin and 36.2% in Chad (Hussein and al., 2005). Benin is usually the fourth biggest cotton producer in West Africa, behind Burkina Faso, Mali and Ivory-cost. In the same way, Benin and Nigeria are among the top 5 Cashew Nut Producing Countries in the World. Furthermore, Burkina-Faso and Nigeria are both Benin's neighbour's countries which all are located in west part of Africa and has each their economy mostly based on cotton and cashew export with practically the same cashew and cotton buyers through the world. Consequently, those three country compete on international cashew and cotton markets. So, it is considered as important to evaluate Benin agricultural trade competitiveness and performance with cashew and cotton export by analysing its competitiveness on regional as well as international markets. This study aims first to calculate according to total agricultural products export of concerned countries by analysing the secondary cashew and cotton exports data retrieved from 1964 to 2014, three indices as the Revealed Comparative Advantage (RCA), secondary the Revealed Competitiveness (RC) and finally the Comparative Export Performance (CEP). By doing so, the position of Benin will be compared to its neighbour trade competitors countries Nigeria and Burkina-Faso between 1964 and 2014 respectively for cashew and cotton. This comparison of Benin would provide an assessment of export specialization of Benin as well. We will evaluate if agricultural trade ensure benefits of competition to the country.

**Figure 1:** Informs about Benin localization and its neighbour countries.



**Figure i:** Benin Localization and its Boundaries.

**Source:** Worldatlas, 2016

## 2. PRESENTATION OF BENIN COTTON AND CASHEW SECTORS

### BENIN COTTON SECTOR

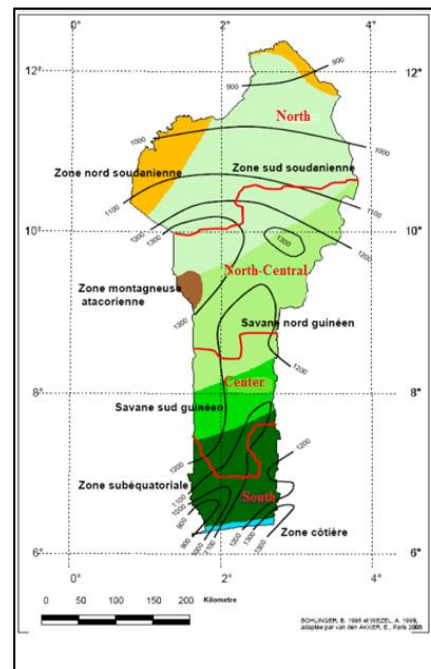
#### 2.1 Importance of Cotton in the Economy

Cotton is sometimes referred to as African ‘white gold’. It represents a crucial source of income in large parts of sub-Saharan Africa (SSA), both for rural populations and for national economies (Tschirley et al., 2009) and it considered to play a key role in development and poverty reduction (e.g. Minot and Daniels, 2002; Badiane and al., 2002; Mosely and Gray, 2008). Benin is usually the fourth biggest cotton producer in West Africa, behind Burkina Faso, Mali and Ivory-cost. The cotton sub-sector has been, since the 1980s, the very basis of the rural and agro industrial economy in Benin: until recently, its contribution to GDP was estimated between 10 and 15 percent; it accounts for 70 to 80 percent of agricultural export value, and to 35 percent of fiscal income (Gergely, 2009). It directly benefits more than 300,000 farmers, and contributes to the monetary income of around 3 million persons. Because of its weight in the economy, the cotton sector has become highly politicized, as cotton growers play an important role in all elections.

#### 2.2 Cotton Production

There was a long tradition of cotton cultivation and use in the making of traditional clothing in northern and central Benin, even before colonization. The French parastatal company CFDT was established in Benin in 1952, and started to develop cotton with a new variety (*Gossypium hirsutum*). After independence (in 1960), CFDT maintained its operation in northern Benin, while another French parastatal company, SATEC (*Société d'Aide technique et de Coopération*) was established in the central zone. Both companies developed their own extension services, and cotton production doubled within 12 years.

Benin includes 4 differentiated cotton growing areas according to (Gergely 2009): the northern zone (Alibori, Atacora), the north-central zone (Borgou and Donga), the central zone (Zou and Collines) and the southern zone (Ouémé, Plateau, Couffo and Mono). Part of cotton production is located in the northern region, where poverty is concentrated and where there are few possibilities for diversification (Gergely, 2009). The limits and locations of the zones are shown on the figure 2. As the figure shows, the northern and north-central zones present the best agro-climatic conditions for cotton. The main production area is the northern zone which accounted for 64 percent of total production in 2004, followed by the north-central zone (29 percent of production), and

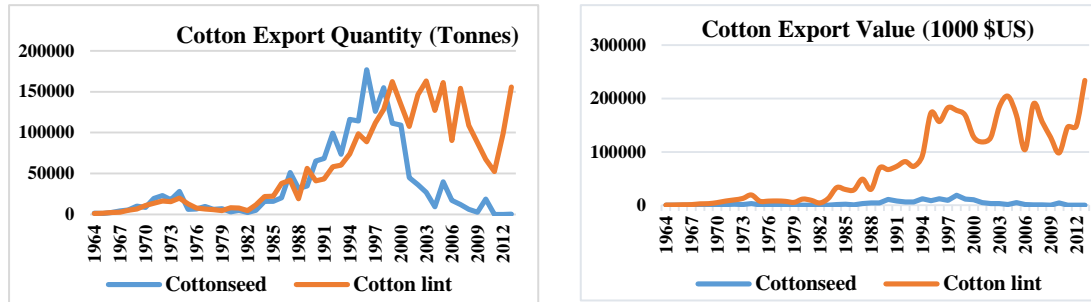


**Figure ii:** Benin Cotton Zone

**Source:** Gergely, 2009

the central and southern zones, which have a marginal production (8 percent altogether). The share of the northern zone continued to increase dramatically in subsequent years, and reached 80 percent in 2007, as cotton has tended to be abandoned in more southern regions, where it is less profitable, and where alternative crops are available.

**Figure 3:** informs about Benin cotton seed production between 1964 and 2014.



**Figure iii :** Cotton Production between 1964- 2014

**Source:** FAOSTAT, 2017

Production of seed cotton expanded dramatically between 1980 and 1996 (Figure 3), from less than 20,000 tons to about 350,000 tons. It then levelled out between 1996 and 2004, before collapsing between 2004 (428,000 tons) and 2010 (140,000 tons). After 2011 the cotton seed production falls again and from 164,000 tons in 2011 to 149,000 tons before rising again from 2013 to 160,000 tons (figure 3). It should be noted that the expansion of production is partly the result of increased yields (0.78 tons / ha in the period 1961-1980 and 1.13 t / ha between 1982 and 2009), but mainly due to higher acreage, which multiplied tenfold between 1980 and 1995. It has to be noticed that Benin cotton seed quantity exceeds considerably cotton lint production.

### 2.3 Cotton Trade

The Sub-Saharan Africa countries export 85% of their cotton production. However, growth in African production is mainly due to the increase of land for growing cotton, particularly in the CFA franc zone (Common currency for 14 French former colonies), rather than an increase in performance, as is the case in the rest of the world. Most of the West African cotton is exported unprocessed in the form of cotton fiber and is very sensitive to price fluctuations on international markets.

The following figure 4 plots Benin cotton-lint export between 1964- 2013.

**Figure iv :** Cotton Export Quantity and Value from 1964-2014

**Source:** FAOSTAT, 2017

### 3. BENIN CASHEW SECTOR

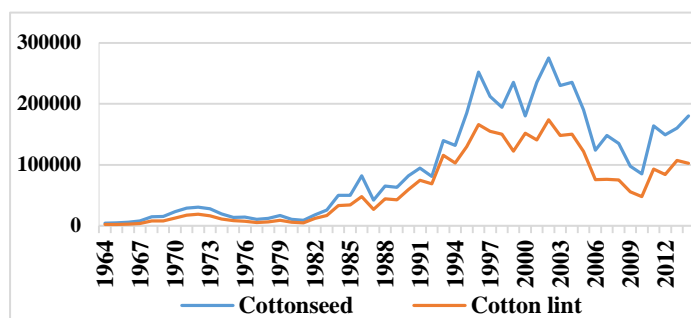
#### 3.1 Importance of Cashew in the Economy

The cashew sector represents a huge agricultural export opportunity for Benin, together with cotton. The sector accounted for 13.5% of Benin's exports in 2008 and 1.7% of traffic at PAC (Port of

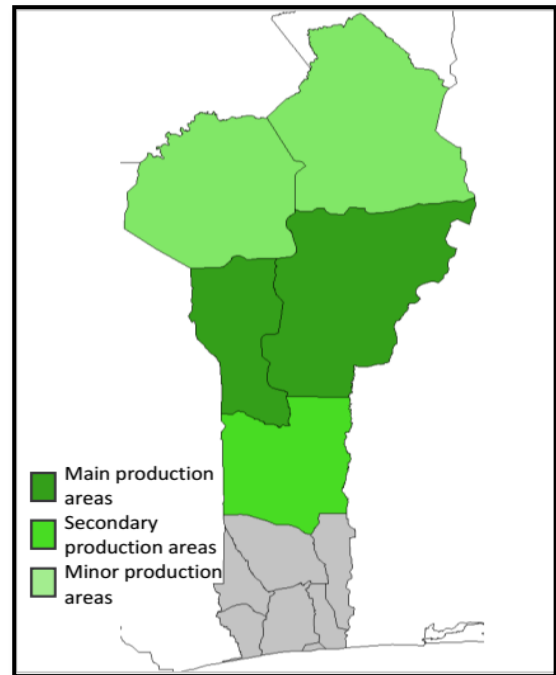
**Cotonou**, 2009). Cashew nut exports represent about 8% of total export value, 7% of agricultural GDP, and 3% of the national GDP in 2008. By replacing cotton, which had always been Benin's top agricultural export product, cashew outpaced all agricultural products exported by Benin; that is how, exports of cashew nuts constitute the second largest source of agricultural export earnings in the country in 2008. According to the *MEF (2008)* the *FOB value* of goods exported by Benin rose by 9.3% in comparison to 2007, increasing from 419.5 billion CFAF (\$68 Millions) in 2007 to 458.3 billion CFAF (\$74 Millions). Moreover, in 2000 cashew nuts accounted for more than 9% of the country's total exports, generating revenues of 12.5 billion FCFA (\$21 Millions). These exports have been growing since the second half of the 2000s, reaching over 12% of export earnings in Benin in 2012. In addition cashew sector generates diverse income. It contributes to the monetary income of producers and also generates jobs (Anonymous, 2015b).

#### 3.2 Cashew Production

In 2015, South-almost same Cashew around Tons each 90 % of production



West Africa is a major cashew producer: Nine countries in the region generate 35-40 % of global production, and Côte d'Ivoire (Ivory Coast), Guinea-Bissau, and **Benin** are

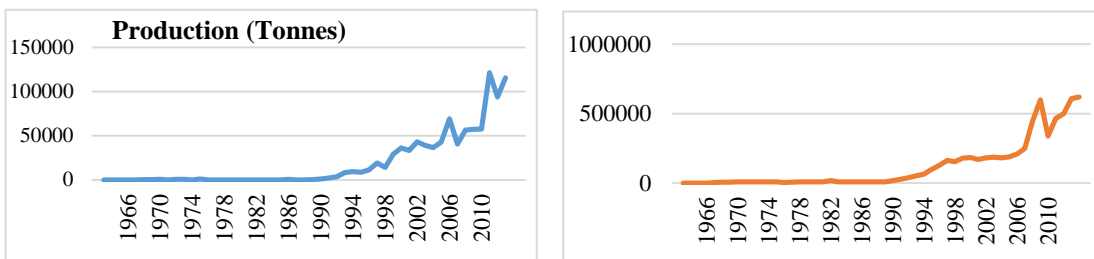


**Figure v :** Distribution of Cashew Acreage in Benin  
**Source:** Anonymous, 2015b

among **the world's top five exporters** of raw cashew nuts. Figure 5 informs about the share of cashew production areas by region in 2015.

In the wake of the cotton crisis, and as part of the diversification of agricultural production and rural revenues, the cashew nut industry presents attractive development opportunities for Benin. As in other countries in West Africa (Burkina Faso, Cote d'Ivoire, Ghana etc.), cashew production has been growing in Benin since the late 90s, driven by global demand. Global exports of cashew have soared since 2002 (Figure 5) and Benin was inundated with cashew plantations in fifteen years. According to estimates provided by the African Cashew Alliance (ACA), the areas planted with cashew trees multiplied twentyfold since the late 90s, from 10,000 ha to 200,000 ha in 2012. Today, 8 of the 12 departments of the country produce cashew.

Cashew nut production in Benin takes place in three districts: **Atacora, Borgou and Zou**. In terms of climatic conditions, the most favourable area is between **Gamia** in the north and **Abomey** in the south (figure 5). The production of raw cashew nuts, in 8 of the country's 12 departments, occupies about 200,000 planters working a total of 190,000 ha in an agroforestry land-use system (FAOSTAT reported by FBSPL (2008)) that also produces annual crops such as cotton, manioc, maize, groundnuts and sorghum. Most of the crops are grown without chemical inputs. Apart from the very noticeable increase in activity at the end of the nineties, due to the rapid rise in prices paid to growers, this crop, which is Benin's biggest export after cotton, remains



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 ively little known.

The area planted for the 1999-2000 harvest consisted of more than 15,000 hectares, of which:

- 5,323 hectares are old national plantations established between 1961 and 1976. These are generally in poor condition, and some have disappeared in fires. There are an estimated further 2,100 hectares available that need either maintenance or complete rehabilitation.
- 10,000 hectares of private plantations, of which 40% have been planted since 1995

The figure 6 bellow plots Raw Cashew Nut (RCN) production and areas harvested between 1964 and 2014

**Figure vi** : Benin Raw Cashew Nuts Production and Area Harvested (1964-2014)

**Source:** FAOSTAT, 2017

Benin's cashew nuts are considered to be the second best in West Africa, after Guinea-Bissau's. The late 1990s saw international demand for cashews increase and stimulate interest in increasing production in Benin. Cashew plantations grew from about 10,000 ha in 1990 to more than 190,000 ha in 2008, according to FAOSTAT data (figure 6). Some 200,000 growers raise the crops on plots averaging between 1 and 1.5 ha, with growers averaging 1.5 plots each. The largest plots are between 5 and 30 ha, with very

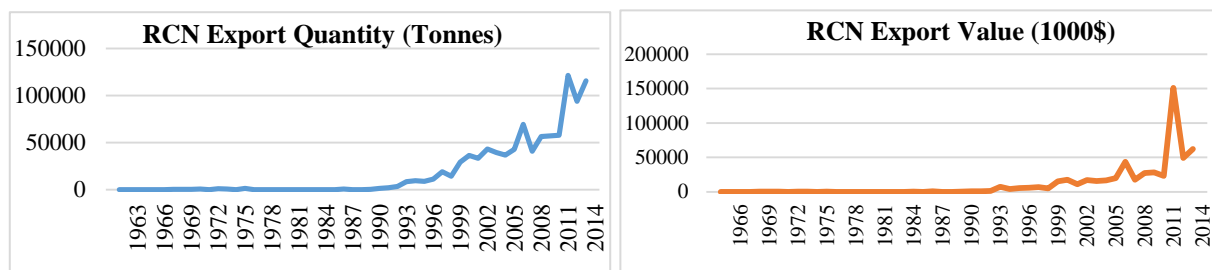
few reaching up to 50 ha in size. Cashews can be grown all over the country, but the lower third of the country (from Ketou up to Gogounou), not including the littoral area, is the optimal production area (as showing on the figure 5). 2015 production was about 135,000 metric tons (Anonymous, 2015b).

### 3.3 Cashew Exportation

The cashew sector represents a huge agricultural export opportunity for Benin, together with cotton. The main bright spot for Beninese trade is cashew exports, which have grown by 40% in dollar terms over the last three years and now represent about as much as cotton in Benin's export portfolio (17% for cashew against 18% for cotton on average during 2010-2012) (Anonymous, 2015c). Indeed, exports of raw nuts rose from 36,487 tonnes in 2001 to 116,398 tonnes in 2008 (PAC, 2009). According to MEF (2008), the change is the result of growth in exports of cashew nuts (+30.7%) and cotton fiber (+16.5%). Cashews represented 8% of the total value of exports in 2008, 7% of agricultural GDP and 3% of national GDP. Exports from Benin reached 116,398 metric tons in 2008, 15% of which included cashew nuts from other countries, such as Nigeria, Togo, and Burkina Faso – all much smaller producers. The farm gate price in 2008 averaged \$500.00 per ton, with each farmer producing about ½ ton annually.

The following figure 7 plots Benin Raw cashew nuts (RCN) export quantity and value from 1964 to 2014.

**Figure vii** : Benin Raw Cashew Nut (RCN) Export Quantity and Value between 1964 and 2014



**Source:** FAOSTAT, 2017

Almost the entire production is exported, untreated, to India. India dominates the world market in all areas: production, export and industrial processing. According to Kakpo and al., (2006), Raw nuts are exported to mostly India (70% of total production), with Vietnam, Pakistan, and Singapore (25% shared between them) next, followed by Malaysia, Sri Lanka, Thailand, China, and Indonesia. Only 5% remains for local processing or nearby informal trade to Nigeria and Togo of locally processed/packaged cashews. 100 % of Afonkantan output white Kernels (processed product) is shipped to the Netherlands (Tandjiekpon, 2010). About 70% of the output of small-scale and semi-industrial units is sold on the national market, 20 % in Western and Central Africa and 5% informally in Europe and the United States (Kapko and al., 2006).

## 4. MATERIAL AND METHODOLOGY



#### 4.1 Data

In this study, the secondary cashew and cotton trade data was retrieved from 1964 to 2014. But according to data availability and total agricultural products exports of concerned countries, three trade indices as the Revealed Comparative Advantage (RCA), the Revealed Competitiveness (RC) and Comparative Export Performance (CEP) are calculated for each selected export crop.

#### 4.2 Methodology

##### ➤ Revealed Comparative Advantage (RCA) Index

Revealed comparative advantage (RCA) index is often used to measure the country's international competitiveness in certain products or industries. The RCA index was formulated by Bela Balassa in 1965 and since then it is known as the index of Balassa in the literature. RCA index is used in many empirical studies to determine a country's strong sectors. The Revealed Comparative Advantage (Balassa's RCA) index is calculated as follows:

$$RCA_{ij} = \left[ \left( \frac{X_{ij}}{X_{it}} \right) \div \left( \frac{X_{nj}}{X_{nt}} \right) \right]$$

Where:

***RCA<sub>ij</sub>*** = Benin revealed comparative advantage of commodity j

***X<sub>ij</sub>*** = Benin exports of commodity j to the world

***X<sub>it</sub>*** = Benin total agricultural products export to the world

***X<sub>nj</sub>*** = rival country's export of commodity j

***X<sub>nt</sub>*** = Benin partner's total agricultural export to the world

Applying this formula to the case of this study,  $RCA_{cashew}$  and  $RCA_{cotton}$  are calculated. As almost Benin entire cashew production is exported to India, India is chosen as Benin partner for  $RCA_{cashew}$  calculation. As for  $RCA_{cotton}$ , Vietnam is selected. The values of the index vary from 0 to infinity ( $0 < RCA_{ij} \leq \infty$ ). **The country has a comparative advantage in  $RCA_{ij} > 1$ . If  $RCA_{ij} < 1$ , it is considered that the country has a comparative disadvantage in the selected crops.**

##### ➤ Revealed Competitiveness (RC) Index

Vollrath (1987, 1989 and 1991) and Vollrath and De Huu Vo (1990) included imports as well for computation of RTA, which equates the difference between exports (RXA) and imports (RMA) and defined Revealed Competitiveness (RC) by normalizing the export and import indices (Fertö and Hubbard, 2003).

$$RC_{Benin} = \ln RXA - \ln RMA$$

Where,

***lnRXA*** = Benin total agricultural export to the world

***lnRMA*** = Benin total agricultural import to the world

However, directly the logarithm of RCA index is used for Benin and its rivals for competitiveness analysis of cotton and cashew markets. **A positive value for RC is interpreted as the country has comparative advantage, while a negative index value means disadvantageous position for the country.** The index is calculated for

Benin and its competitors Burkina-Faso for cotton and Nigeria for cashew to determine which country has a better position in terms of value of its product exports with reference to cotton and cashew markets considering changing production and yield amounts between selected last 50 years (1964-2014).

#### ➤ **Comparative Export Performance (CEP) index**

In addition, to evaluate the export specialisation of the concerned countries, Comparative Export Performance (CEP) index is calculated (Serin and Civan, 2008).

$$CEP = \ln [(XiB/XB) / (XiA/XA)]$$

$XiB$ =Benin's export of good i to world

$XB$ = Benin's total Agricultural products exports to world

$XiA$ = the rival country's export of good i to world

$XA$ = the rival country's total Agricultural products exports to world

**The index is evaluated between rivals considering which has higher value. The country with higher CEP is said to have comparative advantage over the other.**

## 5. APPLICATION OF THE FORMULA

### • COTTON

$$RCA_{cotton} = \left[ \left( \frac{X_{ij}}{X_{it}} \right) \div \left( \frac{X_{nj}}{X_{nt}} \right) \right]$$

$X_{ij}$ : Benin's cotton exports to world

$X_{it}$ : Benin's total agricultural export to world

$X_{nj}$ : Burkina-Faso's cotton export to world

$X_{nt}$ : Burkina-Faso's total Agricultural product export to world

$$RC_{cotton} = \ln RXA - \ln RMA$$

$RXA$ : Benin cotton Export to world

$RMA$ = Benin cotton Import to world

$$CEP_{cotton} = \ln \left[ \frac{X_{iB}}{X_B} \div \frac{X_{iA}}{X_A} \right]$$

$X_{iB}$ =Benin's cotton export to world

$X_B$ = Benin's total agriculture exports to world

$X_{iA}$ = Burkina-Faso's cotton export to world

$X_A$ = Burkina-Faso's total agricultural products exports to world

### • CASHEW

$$RCA_{cashew} = \left[ \left( \frac{X_{ij}}{X_{it}} \right) \div \left( \frac{X_{nj}}{X_{nt}} \right) \right]$$

$X_{nj}$ : Benin's cashews exports to the world

$X_{it}$ : Benin's total agricultural products export to the world

$X_{nj}$ : Nigeria's total cashews export to the world

$X_{nt}$ : Nigeria's total agricultural products export to the world

$$RC_{cashew} = \ln RXA - \ln RMA$$

$RXA$ : Benin cashew Export to the world

$RMA$ = Benin cashew Import Export to the world

$$CEP_{cashew} = \ln \left[ \frac{X_{iB}}{X_B} \div \frac{X_{iA}}{X_A} \right]$$

$XiB$ =Benin's cashew export to world

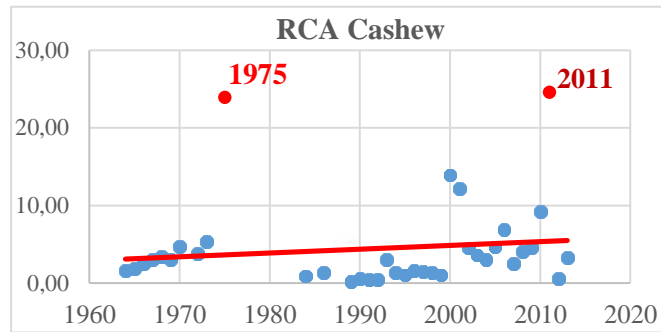
$XB$ = Benin's total agricultural products exports to world

$XiA$ = Nigeria's cashew export to world

$XA$ = Nigeria's total agricultural products exports to world

## RESULTS AND DISCUSSION

In this study we analysed the comparative advantage of Benin's cotton and cashew trade. Benin's cotton and cashew trade competitiveness and performance are compared to its competitor's countries Nigeria and Burkina-Faso. It has to be noticed that the index are calculated according to Benin and involved countries' **total agricultural export**.



### ➤ Revealed Comparative Advantaged (RCA) Index

#### • Cotton (Benin & Burkina-Faso)

Average RCA cotton ( $RCA_{Av}$ ) (50 years): **0.92 < 1**

**Figure viii** : Agricultural Revealed Comparative Advantaged for cotton (Benin & Burkina-Faso)

According to average RCA ( $RCA_{Av} = 0.92$ ) calculated for the 50 years (1994-2014), Benin has comparative disadvantage in Cotton production over Nigeria. Nevertheless there are years that his has comparative advantage in his production (points upper 1 on the figure 8).

#### • Cashew (Benin & Nigeria)

According to the below figure 9 and the average RCA ( $RCA_{Av} = 4.46$ ) calculated for the 50 years (1994-2014), Benin has comparative advantage over Nigeria in Cotton production. There are years that his has comparative disadvantage in his production (figure 9).

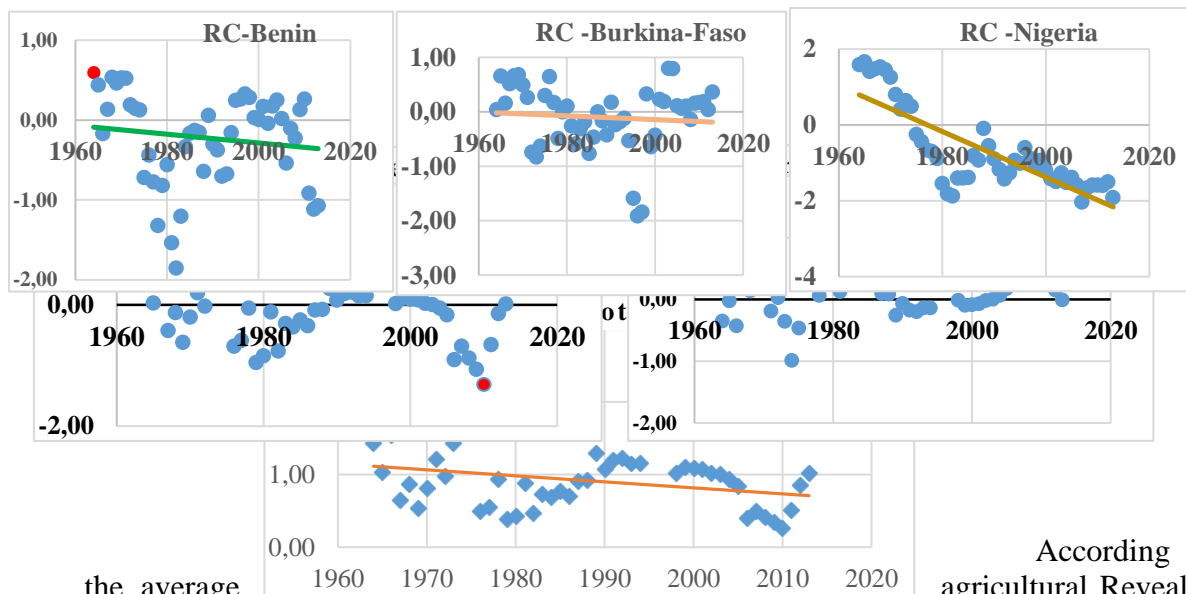
**Figure ix** : Agricultural Revealed Comparative Advantaged for cashew (Benin/Nigeria)

➤ **Revealed Competitiveness (RC) Index**

Revealed competitiveness index of three selected countries 'agricultural trade is calculated.

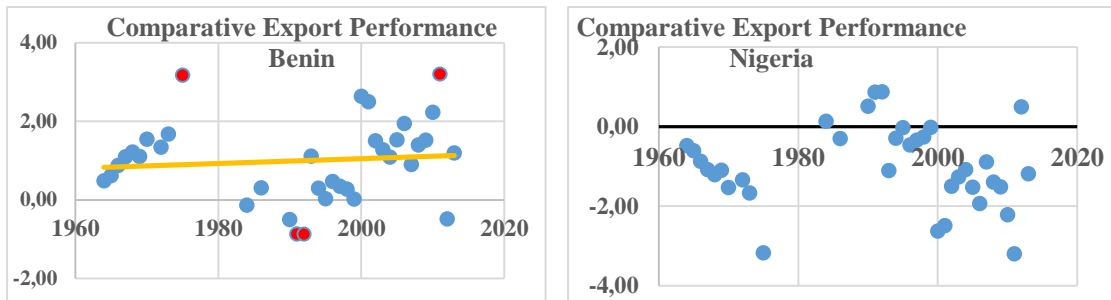
**Figure x** : Agricultural Revealed Competitiveness of selected countries

$$RC_{Av\ Benin} = -0.22 < 0 \qquad RC_{Av\ Burk-faso} = -0.10 < 0 \qquad RC_{Av\ Nigeria} = -0.69 < 0$$



the average According to agricultural Revealed Competitiveness (RC) calculated for all of the selected countries, their all have a comparative disadvantage in their agricultural trade. Meant that their agricultural export

to the world is less than their agricultural import (Export < Import). Nigeria has the least average revealed competitiveness compared to others selected countries.



➤ **Comparative Export Performance (CEP) index**

- Comparison of **Benin & Burkina-Faso** for **Cotton**

$$CEP_{Av\ Benin} = -0.19 < 0$$

$$CEP_{Av\ Burk-faso} = 0.19 > 0$$

**Figure xi** : Agricultural Revealed Competitiveness of Benin and Burkina-Faso

According to the value of average agricultural comparative export performance index obtained from 1994-2014 for two compared countries, Burkina-Faso has a comparative advantage over Benin for cotton production.

- Comparison of **Benin/Nigeria** for **Cashew**

**Figure xii** : Agricultural Comparative Export Performance (CEP) of Benin and Nigeria for cashew.

$$CEP_{Av\ Benin} = 1 > 0$$

$$CEP_{Av\ Nigeria} = -1 < 0$$

The value obtained from the calculation of average agricultural comparative export performance for 50 years (1994-2014) confirms that Benin has a comparative advantage in his cashew production.

## 6. DISCUSSION

Benin has generally a comparative disadvantage in cotton production over Burkina-Faso. Nevertheless he has comparative advantage for some years. So, Burkina-Faso's cotton is generally more competitive than Benin's. Burkina-Faso has the ability to produce cotton at a lower opportunity cost than Benin. Then, it can sell its cotton at a lower price than its competition to generate more revenues.

Benin has generally a comparative advantage in cashew over Nigeria. Even though Nigeria has comparative advantage for some years. Benin's cashew is then more competitive than Nigeria's one. So Benin can sell its cashew at a lower price than his competitor as he can produce them at a lower opportunity cost.



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