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# **India's Export Opportunities with South Africa: A Study of Select South African Countries**

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#### ABSTRACT

The paper focuses on bilateral trade related between India and South Africa highlighting that some of the fastest growing economies in the world are now in Africa. It analyses the trade pattern of the select South African countries and assess the intensity of the trade relations between India and South Africa. Further the Revealed Comparative Advantage and Revealed Import Dependency Index were used to identify the commodity groups with trade potential between India and the South African market. The paper also discusses in brief the challenges and opportunities of trade between India and South Africa.

*Keywords:* India & South Africa, Competition, Revealed Comparative Advantage, Trade Intensity index, Revealed Import Dependence, Import Intensity, Export Intensity, Bilateral Trade, Congo, Ethiopia, Ghana, Mozambique, Nigeria, Tanzania, Zambia.

#### **1. INTRODUCTION**

South Africa is the African country most widely recognised as a global player. As the biggest economy on the continent, with global aspirations in terms of a new world order and a seat on the UN Security Council, Africa is now considered as a continent poised for economic growth. It is the 3<sup>rd</sup> fastest growing economy of the world. The rate of urbanization is higher than India and lower than China and the continent comprises of some of the world fastest growing economies. According to the data available from the World Bank, Africa is richer than India on the basis of GNI, and a dozen African countries have a higher GNI per capita than China.

Africa offers among the world's best investment prospects. Also a shift of global economic power to emerging giants benefits Africa. Large economies such as China and India are seeking resources from Africa thus pushing up the commodity prices internationally and providing investment opportunities in African countries.

India's attractiveness as an alternative development partner in Africa has been widely noted. The strength of India's relations with African countries and the source of much of its soft power are derived from more than just its recent growth in trade and investment. Throughout its history of co-operation with African nations, India has emphasized that it has "given what it could" in terms of financial aid and technical support and it continues to do so even as its ability to promote relations through economic incentives – primarily through trade, tourism and investment – has grown. India's trade exchanges with Africa touched a figure of US\$ 71 billion by the year 2016, with balance of trade in favour of Africa. India is also shifting its investment in procuring energy away from the increasingly unstable West Asia towards Africa. At 17%, Africa is currently the second biggest source of crude oil imports for India. One of the defining features of India's Policy towards Africa is the introduction of the Focus Africa Program to intensify its trade and economic relations with Africa. India has become the 5<sup>th</sup> largest trading partner to the South Africa in the Asia region. In this context the current paper attempts to explore the existing trade relations between India and the select South African nations, prospects for future trade between India and the select group of nations and further attempts to identify the commodity groups with trade potential between India and the South African market. The paper also discusses in brief the challenges and opportunities of trade between India and the South Africa.

## 2. REVIEW OF EARLIER STUDIES:

Elizabeth Sidiropoulous (2011) views that there is scope for deepening the substance of political and economic relations between India and South Africa, which has been hampered by capacity constraints on both the sides and differing priorities. She observes that development cooperation between the two in Africa is not a priority for either but using the private sector in this field is an important potential mode. Rakesh Mohan Joshi, Biswajit Nag, Ashish Gupta (2012) analyses the bilateral strategic cooperation between India and South Africa highlighting that some of the fastest-growing economies in the world are now in Africa. They have analysed the overall trade dynamics between India and Africa in the select sectors, where the two dimensional scatter diagrams are used to identify the countries which are poised for economic growth in the selected sectors. Further the Constant Market Share Analysis model is used to understand the reason of export growth and more precisely the role of competitiveness gain in the African market. Folashade Soule-Kohndou (2013) observes that the potential of increased bilateral relations between the two countries was not fully explored and increased trade was largely hampered by the protectionist measures such as tariff barriers on South African products especially in agriculture, different legislation between the two countries, and a lack of good infrastructure in transport, communications and energy. Anirudh Menon (2013) argues that India should accelerate its trade and aid relationship with the emerging economies of Africa especially when India is also pursuing a permanent membership of the United Nations Security Council. He viewed that the former can leverage on its growing trade relationship with the African Union, overall the during the last two decades, the emerging economies of Africa have developed important bilateral partnerships with India and other emerging economic powers especially Brazil and China. Harsh. V. Pant (2016) observes that India today has a growing stakes in Africa. India's focus over the last few decades has largely been on capacity building on the continent, providing more than 1\$ billion in technical assistance and training to personnel under the ITEC programme and India has committed to \$75 billion to African infrastructure, covering 137 projects in more than 40 countries. The country has also offered duty-free market access to Africa's LDCs. But he view that India's trade with Africa which is currently US\$ 71 billion remains far below the potential.

## **3. OBJECTIVES OF THE STUDY**

- 1. To estimate the extent of Intensity of trade relations between India and the select South African countries.
- 2. To identify the commodities with trade potential, which could further enhance the trade relations between the nations.
- 3. To discusses the challenges and opportunities of trade between India and South Africa.

## 4. METHODOLOGY

The study was carried on the basis of secondary data. The data was collected through a wide variety of sources viz., dailies, journals, magazine on international trade, yearbooks publishing statistical data with respect to trade viz., World Bank, UN, Unescap, IMF, WTO, and Uncomtrade online data sources.

## 4.1. Models Applied for the Study:

The analysis was done by adopting the following methodology.

- 1. Revealed Comparative Advantage Index (RCA)
- 2. Revealed Import Dependency Index (RID)
- 3. Export Intensity Index (EII)
- 4. Import Intensity Index (III)

#### 4.2. Revealed Comparative Advantage Index

The paper identifies the pattern of revealed comparative advantage using the Balassa's (1965) index for the export data. Measures of revealed comparative advantage (RCA) have been used to assess the country's export potential. The index has been calculated at the sector and commodity level using SITC-2 digit level classification. The RCA indicates whether a country is in the process of extending the products in which it has trade potential, as opposed to situations in which the number of products that can be competitively exported is static. It can also provide useful information about potential trade prospects with new partners. Countries with similar RCA profiles are unlikely to have high bilateral trade intensities unless intra industry trade is involved. RCA measures, if estimated at high levels of product disaggregation, can focus attention on the other nontraditional products that might be successfully exported. The RCA index of country 'i' for the product 'j' is often measured by the product's share in the country's exports in relation to its share in the world trade:

$$RCA_i = (X_{ij} / X_{it}) / (X_{wj} / X_{wt}),$$

Where  $X_{ij}$  and  $X_{nj}$  are the values of country's exports of product j and world exports of product j and where  $X_{it}$  and  $X_{nn}$  refer to the country's total exports and world total exports. A value of less than unity implies that the country has a revealed comparative disadvantage in the product. Similarly, if the index exceeds unity, the country is said to have a revealed comparative advantage in the product.

#### 4.3. Revealed Import Dependence Index

The index identifies the commodities, which have import dependence on the partner countries. The RID index also been called as Revealed Comparative Disadvantage index. The RID index will give us the commodity-wise structure of imports in the countries. The RID is defined as commodity '*i*'s' share in country's total imports vis-à-vis its share in total world imports. The RID index can be computed as follows:

RID 
$$i = (M_{ia} / M_a) / (M_{iw} / M_w)$$

Where  $M_{ia}$  is equal to imports of commodity '*i*' from a country '*a*', Ma is equal to total imports of a country '*a*',  $M_{iw}$  is equal to total value of the world imports of commodity *i* and  $M_w$  is equal to total world imports. As in the case of RCA index, an RID index exceeding one suggests a strong dependence of the country on the import of a specific item in a reference period and vice-versa.

While an RCA analysis explains about the comparative advantage that a country enjoys in the export of a certain commodities in general, it does not necessarily tell us about the specific import requirements of the countries being focused for exports. So, although India may have a comparative advantage in the export of certain commodities, it may not be necessary that South African market has a requirement for the same commodities. A comparison of the RCA of commodities in India with the RID of commodities in Select South African countries will give a more reliable picture of the export potential of the Indian goods in South Africa and Vice versa. If for a certain commodity India has a RCA index greater than one, and for the same commodity South Africa has a RID greater than one, than such a commodity is considered to have a strong export potential in that particular market.

The RCA and RID values for Select South African countries and India are calculated and matched to assess the trade potential between the nations.

#### 4.4. Intensity Indices

Trade Intensity Index can be divided into Export Intensity Index (EII) and Import Intensity Index (III) to assess the pattern of exports and imports. Following Kojima (1964) and Drysdale (1969) they can be defined as follows:

#### 4.5. Export intensity index

The ratio of export share of a country/region to the share of world exports going to a partner. EII can be defined as,

$$\text{XII}_{ij} = \frac{x_{ij} / \text{X}_{iw}}{x_{wj} / \text{X}_{ww}}$$

Where  $x_{ij}$  is the dollar value of exports of country/region *i* to country/region *j*,  $X_{in}$  is the dollar value of the exports of country/region *i* to the world,  $x_{nj}$  is the dollar value of world exports to country/region *j*, and  $X_{nnv}$  is the dollar value of world exports. An index of more than one indicates that trade flow between countries/regions is larger than expected given their importance in world trade.

#### 4.6. Import Intensity index

The ratio of import share of a country/region to the share of world imports going to a partner. III can be defined as,

$$III_{ii} = M_{ii} / M_{iw} / M_{wi} / M_{wn}$$

Where  $M_{ij}$  is the dollar value of imports of country/region *i* to country/region *j*,  $M_{inv}$  is the dollar value of the imports of country/region *i* to the world,  $M_{nj}$  is the dollar value of world imports to country/region *j*, and  $M_{nnv}$  is the dollar value of world imports. An index of more than one indicates higher import intensity between the nations.

The Export Intensity Index and the Import Intensity Index of India and Select South African Countries were calculated to observe the Intensity of trade between India and the South Africa.

## **5. THE ANALYSIS**

Some of the fastest growing economies in the world are now in Africa. The paper has analyzed the trade data in detail, considering both India's exports and global imports of African countries. It has indentified major barriers to Indian exports in African countries looking into various secondary sources including reports and websites. To select the prospective countries with export opportunity from the continent the author has scrutinized both India's export value to African countries (Avg of 2001-2015), India's FDI (Avg of 2001 -2015) and its country specific export growth (Avg growth during 2001-2015) on the basis of which the following seven countries (Ethiopia, Mozambique, Tanzania, Congo, Ghana, Zambia and Nigeria) were taken for the study.

#### 5.1. Bilateral trade between India and South Africa:

Commercial relations have flourished since the establishment of diplomatic relations in 1993 between India and South Africa. On the trade front, the value of bilateral trade has trebled from US\$ 2.5 billion in 2003-2004 to US\$ 7.5 billion in 2008-2009 and by the end of the year 2013 the trade volume touched a peak of US\$ 11.15 billion, and the total bilateral trade reached a peak of US\$ 71 US\$ billion by the end of 2016. Two-way investment has also grown over the years. Overall investment stock of Indian companies in South Africa amounted to US\$300 million by 2016 and South African investment in India amounted to US\$ 600 million in the same period. Some of South Africa's key companies have a presence in India including Sasol, First National Bank and the Airports Company South Africa. Indian companies in South Africa include Tata Motors, Mahindra, United Breweries, Dr. Reddy's Kirlosakar and Dabur. Indian companies are increasingly active in such oil-rich regions as coted'Ivoire, Libya, Egypt, Angola and Gabon. Indian private companies and public sector units already have oil investments in Mozambique and investments in the gas sector in Kenya and Tanzania. The Tata Group has made a diversification of investments in the South Africa in the various sectors- iron and steel, motor vehicles industry with the hotel industry is on cards.

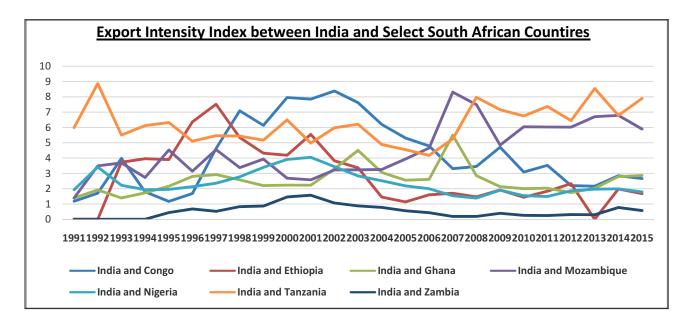
India was also involved in building critical rail and road infrastructure in Ethiopia, Djibouti and Uganda and Africa is becoming a key destination for the Indian investments in software, telecom and financial sectors. India's also partnering a joint venture in Greater Nie Oil Project of Sudan along with Canada and Malaysia. Besides trade India also provides development assistance to Africa, largely on an equal partnership basis. India, Brazil and South Africa have established the IBSA forum, which links democratic development

initiatives in Africa, Latin America and South Asia, a model which works on democratic development. Besides South Africa has also been admitted as a member of the BRICS grouping and has been an active member of the group which has intensified its trade and economic relations with other BRICS countries. Also, the Government of India launched the "Focus: Africa" programme under the EXIM Policy of 2002-07 further to enhance its bilateral and regional commercial relations with the COMESA Region. In this context it would be useful to assess the intensity of trade relations between India and the South Africa.

## 5.2. Trade Intensity Index between India and the South Africa

The following Chart. I and Chart. II investigates the Export Intensity Index (EII) and Import Intensity Index (III) of trade between India and the Select South African countries (The detailed calculations of EII and III are provided in the Annexure I and Annexure. II respectively). The values of Export Intensity Index (EII) and Import Intensity Index (III) were calculated for the time period 1991 - 2015, which presents a growing intensity of trade between the nations. Off late the intensity of trade between India and South Africa has been on rise amidst of the economic turmoil and global recession especially in the European Union and the United States. This has been presented by the increase in the values of Export Intensity Index of India with the seven South African nations under study. India's Export Intensity Index with all the seven South African nations has been greater than one for the total period except for Zambia. The average Export Intensity Index value of India taken for study between 1991-2015 is greatest with Tanzania (6.218), followed by Mozambique (4.499) and Congo (4.215). Ethiopia's average Export Intensity Index for the study period has been recorded at 3.205 followed by Ghana (2.537) and Nigeria (2.339). Zambia's average Export Intensity Index has been lower than 1 at 0.630 which is one of the weakest economy's of South Africa. Though India has been ranking as 6<sup>th</sup> largest export partner, it has been not ranking in the import sources of Zambia. Mozambique is one economy which has emerged as the most important source of India's export destination, which is presented by the growing intensity of export trade index value. For the initial period India's EII with Mozambique's is at 1.391 and this was recorded the highest in the year 2007 (8.310) and by the year 2015 the EII was recorded at 5.896 where India emerged as the 3<sup>rd</sup> largest import source for Mozambique with 11.6 percent of total imports are from India. Similarly with Tanzania also there was a gradual rise of EII with India, for the initial period it was 5.992 and by the year 2015 the EII stood at 6.218, with 16.3 percent of Tanzania's imports are from India after China, largely exporting consumer goods, machinery and industrial raw materials. Nigeria is one African country which has been recorded a greater Export Intensity Index which is greater than one for the whole period taken for study and for Nigeria, India has been the third largest source of imports according to 2015 estimates with a share of 5.5 percent after China and USA and this has been represented in steady EII values.

The trading relationship between India and South Africa can be underpinned by various bilateral agreements. Like in 2003, an agreement of India-Brazil and South Africa agreement was signed with the purpose of fostering the cooperation and coordination activities between these nations on global level; this is presented with the growing intensity levels of India with these nations. Like Ghana is one economy where the EII is registered for more than one for the entire period of the study similar to Ethiopia and Congo, where EII for the current period 2015 is registered at 2.027, 2.324 and 2.537 respectively. For Ghana India largely exports capital equipment, food stuff and refined petroleum. For Ethiopia, India is the fourth largest import source with (5.4 percent) of its imports is from India and Congo with 5.2 percent of its imports are from India.



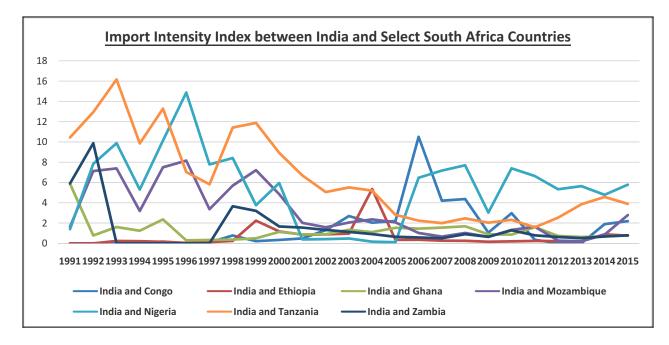
#### Figure 1

Source: Author's Calculations based on unctad.org (Annexure.1)

During the year 1992-93, India and South Africa has the total trade of US\$ 3 million, which has shown a massive increase over the years. It is due to this steady increase India has become the 6<sup>th</sup> largest trading partner of the South Africa in the Asia region and has also bagged the title of 20<sup>th</sup> largest import as well as export market in throughout the world. This can be clearly presented in the growing import intensity index of India with South Africa where the average Import Intensity Index (III), for the period 1991-2015 is greater than one for all the six nations taken for study (Congo: 1.610, Ghana: 1.291, Mozambique: 3.174, Nigeria: 6.795, Tanzania;6.612, Zambia:1.985) except with Ethiopia where the III is 0.770. According to 2015 data available India is not listed in the top 10 export destinations for Ethiopia, significant to mention China is the top export destination for the Ethiopia. Congo is one nation where III of India has been on rise gradually from 2002 till 2010 owing to the India-Brazil and South Africa agreement signed in 2003 with the purpose of fostering the cooperation between the Nations at the global level. Ghana is also a country which presented greater Intensity Index with India for imports for most of the years under study its III with India is greater than one. Mozambique also presents greater intensity values of imports with India. For the initial period it is 1.639, the greatest III value which is registered with India is 7.396 for the year 1993. There was a decline in the current period 2012 (0.265) and 2013 (0.201) due to the global economic turmoil and internal inflationary trend in Mozambique but finally revived back at 2.789(2015)

Nigeria has emerged as Africa's largest economy, with a GDP estimated at US\$ 502 billion for the year 2014. India's import intensity index with Nigeria has been significantly high after Tanzania. For the last 5 years taken for study the average III's is 5. India's major imports have been petrol and petroleum products. Tanzania has been one of the most important sources of imports for India and for all the years taken for study the III has been greater than one. India largely imports gold, coffee, cotton and cashew from Tanzania. Zambia's economy has experienced strong growth in recent years with real GDP growth in 2005-2015 more than 6 percent per year. Though during the period 2005-2015 its Import Intensity Index

with India has been lower than one, presenting the importance of Zambia as an important import source for India. According to 2015 data available India has been listed as the 5<sup>th</sup> largest export destination for Zambia with a 4.5 percent export share and India largely importing tobacco, copper/cobalt and cotton from Zambia.





*Source*: Author's Calculations based on unctad.org (Annexure.1)

## 5.3. Revealed Comparative Advantage & Revealed Import Dependency Index

This Section aims at ascertaining the possibility of commodity trade between India and South Africa. The study tries to identity the broad product groups in which India has a revealed comparative advantage and which also form the major import items for the South African Countries taken for study and vice versa. Thus identifying the complementary or competitive nature of such product groups produced within India vis-à-vis the select South African countries, which reveals the extent of the export opportunities between the nations. For the purpose of the analysis Balassa's (1965) Revealed Comparative Advantage Index (RCA) and Revealed Import Dependence (RID) were used. The RCA is a measure of the natural advantage enjoyed by a country in the conduct of its trade in an environment constrained by regulatory policies and administrative controls perpetuated by the system. The identification of commodities which enjoy Revealed Comparative Advantage would enable the policy makers to formulate an appropriate strategy, which would help to accelerate exports of the specified items and allocate resources to develop those industries, with the potential to earn maximum foreign exchange for the country. The detailed description of RCA index has been provided in the section.IV, Methodology.

The Revealed Import Dependency has also been called as Revealed Comparative Disadvantage, which will give us the commodity-wise structure of imports in the countries. The detailed description of RID is provided in the section of Methodology. While an RCA analysis reveals the comparative advantage that

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a country enjoys in the export of certain commodities in general, it does not necessarily tell us about the specific import requirements of the countries being focused for exports. So, although India may have a comparative advantage in the export of certain commodities, it may not be necessary that the South African countries taken for study would have the requirement for the same commodities. A comparison of the RCA for the commodities in India with the RID of commodities of the seven South African countries and also RCA of the commodities of these with RID of commodities in India will give a more reliable picture of the export potential of the Indian goods in South Africa and South African goods in India (See Annexure .1).

The RCA and RID of 56 commodities (10 industrial clusters) based on the aggregation scheme provided by E.E.Leamer (1984; 1985) was calculated and presented under 10 sectors *i.e.* 1. Petro 2. Raw Materials 3. Forest Products 4. Tropical Agricultural Products 5. Animal Products 6. Cereals 7. Labour Intensive Manufactures 8. Capital Intensive Manufactures 9. Machinery and 10. Chemicals. Both the indices (RCA & RID) were calculated for the time period of 5 years (2008 to 2015) and the average value is presented (Annexure. III & Annexure IV) for analysis which would give an appropriate picture regarding the commodity trade of India and South African economies taken for study. A comparison of RCA Index of the various products between India and selected South African countries helps us in identifying the group of commodities, which either compete or complementary in nature. First, the items having RCA index greater than 1 for India and South Africa respectively were calculated (Annexure. III) and also the RID of the India and South African countries (Annexure.IV) greater than one. Than the commodities with RCA greater than one for India is matched with RID of the selected seven South African countries and vice versa. to arrive at the potential commodities feasible for trade between them and these potential commodities represented from Table. 1 to Table 7 respectively.

	Commodities feasible for trade between India and Congo RCA>1 for India and RID>1 for Congo				
1.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6		
2.	Cereals	Cereals, Cereals Preparations	SITC.4		
3.	Capital Intensive Manf.	Iron & Steel	SITC.67		
4.	Machinery	Electrical Machinery	SITC. 72		
5.	Chemicals	Essential Oils, perfume Materials	SITC .55		
		Chemical Materials	SITC. 59		
		RCA>1 for Congo and RID>1 for India			
1.	Petro	Petroleum Products	SITC. 33		

Table 1

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated

The above table 1 presents a total of seven commodities feasible for trade under 6 commodity category between India and Congo. i.e India where the Revealed Comparative Advantage (RCA) for sugar and sugar preparations, cereals and cereals Preparations, Iron and Steel, Electrical Machinery, Essential Oils, Perfume materials and chemical materials is greater than one they are exactly matching with the Revealed

Import Dependency (RID) for Congo (RID of these commodities greater than one for Congo) presenting the feasibility of trade between both of them. Similarly the RCA for Petro product category of Congo is matching with RID of India, presenting a feasibility of trade. Totally seven commodities has exhibited trade potential between both of them. India can intensify its trade relations with Congo where its neighbouring economy China has largely been catering the import needs of Congo occupying the top place in the import sources of Congo especially when South Africa is looking towards the Asian region.

		es feasible for trade between India and Ethiopia 4>1 for India and RID>1 for Ethiopia	
1.	Petro	Petroleum Products	SITC. 33
2.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6
3.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43
4.	Cereals	Cereals, Cereals Preparations	SITC.4
		Oil Seeds, Oil nuts, Oil Kernels	SITC.22
		Fixed vegetable Oils	SITC.42
5.	Labour Intensive Manufactures	Clothing	SITC. 84
6.	Capital Intensive manufactures	Textile Yarn	SITC. 65
7.	Chemicals	Dying Tanning & Colouring Materials	SITC.53
		Essential Oils, Chemicals Materials	SITC .59
	RCA>1	for Ethiopia and RID>1 for India	
1.	Cereals	Oil Seeds, Oil nuts, Oil Kernels	SITC.22
2.	Chemicals	Essential Oils, perfume Materials	SITC .55

Table	2
1 and	4

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated

A total of 11 commodities feasible for trade between India and Ethiopia under the seven commodity category. Ethiopia's major imports are food and live animals, petroleum and petroleum products, chemicals, machinery, motor vehicles, cereals and textiles and this is presented in RID values which are registered lower than one for these commodity categories along with Petro, Labour Intensive Manf., Capital Intensive Manf. & Chemicals. The RCA of India (>1) is matching with RID (>1) for 10 commodity category Viz. Petroleum Products, Sugar and Sugar Preparations, Animal and Vegetable Oil Processed, Cereals, Cereals Preparations, Oil Seeds, Oil nuts, Oil Kernels, Fixed vegetable Oils, Clothing, Textile Yarn, Dying Tanning & Colouring Materials, Essential Oils, Chemicals Materials and the RCA of Ethiopia with respect to Oil Seeds, Oil nuts, Oil Kernels & Essential Oils, perfume Materials is matching with the RID of India presenting the feasibility of trade.

Commodities feasible for trade between India and Ghana RCA>1 for India and RID>1 for Ghana				
1.	Petro	Petroleum Products	SITC. 33	
2.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6	
3.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43	
4.	Cereals	Cereals, Cereals Preparations	SITC.4	
		Oil Seeds, Oil nuts, Oil Kernels	SITC.22	
		Fixed Vegetable Oils		
5.	Labour Intensive Manufactures	Footwear	SITC. 85	
6.	Capital Intensive Manufactures	Iron & Steel	SITC.67	
	Chemicals	Essential Oils, perfume Materials	SITC .55	
	R	CA>1 for Ghana and RID>1 for India		
	Nil			

Table 3

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated

For Ghana India is the 6th largest import source with a share of just 4.1 percent in Ghana's total imports and this could be intensified observing the commodities feasible for trade a total of 9 commodities, Petroleum Products Sugar and Sugar Preparations Animal and Vegetable Oil Processed Cereals, Cereals Preparations Oil Seeds, Oil nuts, Oil Kernels Fixed Vegetable Oils Footwear Iron & Steel Essential Oils, perfume Materials are feasible for trade between India and Ghana where India RCA>1 and Ghana's RID>1. The top import sources for Ghana were China, Nigeria, Netherlands, Singapore. It could be observed that no commodity is feasible for trade between India and Ghana and hence Ghana can be viewed as potential export destination for India.

		I able 4	
	5	feasible for trade between India and Mozambique >1 for India and RID>1 for Mozambique	
1.	Petro	Petroleum Products	SITC. 33
2.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6
3.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43
4.	Cereals	Feeding Stuff for animals	SITC. 8
		Oil Seeds, Oilnuts, Oil Kernels	SITC.22
5.	Capital Intensive Manf.	Iron & Steel	SITC.67
6.	Chemicals	Chemical Materials	SITC. 59
	$RCA \ge$	>1 for Mozambique and RID>1 for India	
1.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6
2.	Cereals	Feeding Stuff for animals	SITC. 8
		Fixed Vegetable Oils	SITC.42

Table 4

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated.

Mozambique is a potential export and import partner for India observing the growing intensity of trade between both the nations. A total of 10 commodities are feasible for trade between India and Mozambique keeping under the 6 Learner's industrial cluster classification viz. Petroleum Products Sugar and Sugar Preparations Animal and Vegetable Oil Processed Cereals, Feeding stuff for animals, Oil Seeds, Oil nuts, Oil Kernels, Iron & Steel and Chemical Materials. Mozambique enjoys Revealed Comparative Advantage under two industrial cluster classification where India's Revealed Import Dependency Index (RID) is more than one presenting a feasibility of trade between both the economies.

Commodities feasible for trade between India and Nigeria RCA>1 for India and RID>1 for Nigeria				
1.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6	
2.	Animal Products	Fish, Fish Preparations	SITC. 3	
3.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43	
4.	Cereals	Feeding Stuff for animals	SITC. 8	
		Oil Seeds, oilnuts, Oil Kernels	SITC.22	
5.	Chemicals	Dying Tanning & Colouring Material	SITC. 53	
	1	RCA>1 for Nigeria and RID>1 for India		
	Nil			

Table 5

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated

India's bilateral trade has been on rise with Nigeria and India emerged as the 3<sup>rd</sup> largest import source for Nigeria with 5.5 percent trade share. The bilateral trade between both the countries reached a peak of 16.67 billion dollars by the year 2013. Table. 5 presents the list of commodities that could be traded between India and Nigeria. A total of 6 commodities were found feasible to be traded between India and Nigeria viz. Sugar and Sugar Preparations, Fish, Fish Preparations, Animal and Vegetable Oil Processed, Feeding Stuff for animals, Oil Seeds, Oilnuts, Oil Kernels and Dying Tanning & Colouring Material. A significant finding is that no commodity is found feasible for trade where the RCA of Nigeria is greater than one and RID for the same product for India is greater than.

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Commodities feasible for trade between India and Tanzania RCA>1 for India and RID>1 for Tanzania				
1.	Petro	Petroleum Products	SITC. 33	
2.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6	
3.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43	
		Fixed Vegetable Oils	SITC. 42	
4.	Cereals	Cereals & Cereal Preparations	SITC. 4	
5.	Labour Intensive Manufactures	Clothing	SITC. 84	

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	Commodities feasible for trade between India and Tanzania RCA>1 for India and RID>1 for Tanzania				
		Footwear	SITC.85		
6.	Capital Intensive Manfactures	Iron & Steel	SITC.67		
7.	Chemicals	Essential Oils, perfume Materials	SITC .55		
	RC	A>1 for Tanzania and RID>1 for India			
1.	Petro	Petroleum Products	SITC. 33		
2.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43		
3.	Chemicals	Dying Tanning & Colouring Material	SITC. 53		

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated

Tanzania has been one of the potential trade partner of India Tanzania and India have traditionally enjoyed close, friendly and co –operative relations. India is a leading trading and investment partner of Tanzania as well as an important source of essential machinery and pharmaceutical products. Table. 6 presents the products that are feasible for trade between both the nations. A total of 10 commodities are feasible for trade between India and Tanzania under 7 industrial cluster classifications presenting a greater feasibility of trade between them. The total volume of trade between India and Tanzania stood at 1507.01 US\$ billion by 2012. Tanzania's traditional and non-traditional export to India is growing at a rapid pace and the trade gap is narrowing.

Commodities feasible for trade between India and Zambia RCA>1 for India and RID>1 for Zambia			
1.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43
		Fixed Vegetable Oils	SITC. 42
2.	Capital Intensive Manfactures	Iron & Steel	SITC.67
		Textile Yarn	SITC.65
3.	Machinery	Electric Machinery	SITC 72
	RCA>1 for Zambia and RID>1 for	r India	
1.	Tropical Agricultural Products	Sugar and Sugar Preparations	SITC.6
2.	Animal Products	Animal and Vegetable Oil Processed	SITC. 43
3.	Chemicals	Chemical Materials	SITC 59

Table 7

Source: Author's calculations based on Annexure III & IV RCA & RID values calculated

The Zambia-India bilateral trade volumes have reached a total of US\$619 million in 2014 India's major items of exports to Zambia during the period were pharmaceuticals and fine chemicals, machinery and instruments, transport equipment, metals and electronic goods. Others were plastic and linoleum products, non-ferrous metals and manmade yarn fabrics Zambian exports to India during 2013-2014 mainly comprised non-ferrous metals, pearls, precious and semi-precious stones, cotton raw and metalliferous ores

and metal scrap. This has been presented in the Table. VIII, where a total of 8 commodities are feasible for trade between India and Zambia from the 6 industrial cluster classifications. Five commodities are feasible for trade between India and Zambia Viz. Animal and Vegetable Oil Processed, Fixed Vegetable Oils, Iron and Steel, Textile Yarn and Electric Machinery where RCA for India>1 and RID for Zambia >1. A total of three commodities are feasible for trade between Zambia and India where RCA of Zambia >1 and RID of India is >1, presenting the trade bilateral trade potential between them.

## 6. CONCLUSION

At the first glance India and South Africa may look like natural partners in development cooperation in Africa. However, on closer examination it becomes clear that each has significant constraints as well as differing interests. Constraints relate to capacity, but also to politics and the presence of real competitive elements. India articulates its Africa policy through a national-interest prism, especially with regard to energy security, potential markets and terrorism. South Africa is currently reassessing how it articulates its national interest in the context of its African agenda. The two countries' different interests also arise from their size and potential power-projection. India is an aspiring global power, South Africa is still a developing economy. Generally, India faces common problems in most African Countries such as port delay, custom revaluation, Indian transparency as well as frequent change on Government policy. African Countries require capacity development in developing good SPS and TBT standard in which India can provide assistance. As it is already projected that African economies will pick up its growth in next five years and will sustain a high growth shown for the next 20 years (Acha Leke, Susan Lund, Charles Roxburgh, and Arend van Wamelen, 2010). India must make itself ready for taking the advantage of the opportunity. The study provides the analysis that the export growth itself pulls up the import demand and India is a beneficiary of that. However, considering competition form China and other developing economies, India must take focused approach in improving competitiveness considering both macro and micro aspects at the one hand and diversify its product basket to meet the import demand of the South Africa as India's export are currently concentrated only to limited number goods thereby a large bilateral trade potential between India and South Africa has been untapped.

#### 7. ANNEXURE

Year	India and Congo	India and Ethiopia	India and Ghana	India and Mozambique	India and Nigeria	India and Tanzania	India and Zambia
1991	1.178	-	1.391	1.391	1.929	5.992	-
1992	1.702	-	1.917	3.486	3.416	8.867	-
1993	3.981	3.723	1.391	3.684	2.221	5.507	-
1994	1.795	3.958	1.723	2.727	1.933	6.121	-
1995	1.167	3.899	2.154	4.526	1.953	6.326	0.432
1996	1.682	6.362	2.801	3.14	2.126	5.101	0.676

 Table 1

 Annexure. Export Intensity Index between India and Selected African Countries

Year	India and Congo	India and Ethiopia	India and Ghana	India and Mozambique	India and Nigeria	India and Tanzania	India and Zambia
1997	4.621	7.516	2.918	4.547	2.357	5.46	0.518
1998	7.088	5.342	2.576	3.371	2.778	5.435	0.824
1999	6.141	4.315	2.2	3.93	3.396	5.173	0.864
2000	7.956	4.183	2.231	2.683	3.908	6.493	1.456
2001	7.853	5.543	2.223	2.574	4.049	4.976	1.573
2002	8.381	3.821	3.288	3.224	3.436	5.981	1.065
2003	7.621	3.362	4.5	3.228	2.83	6.212	0.876
2004	6.198	1.453	3.056	3.254	2.515	4.887	0.773
2005	5.309	1.132	2.547	3.93	2.182	4.551	0.555
2006	4.792	1.596	2.603	4.652	1.997	4.173	0.429
2007	3.306	1.704	5.494	8.31	1.533	5.249	0.184
2008	3.449	1.462	2.847	7.49	1.384	7.971	0.184
2009	4.711	1.911	2.128	4.848	1.904	7.166	0.392
2010	3.082	1.438	2	6.045	1.542	6.752	0.255
2011	3.521	1.833	2.032	6.031	1.489	7.376	0.246
2012	2.201	2.324	1.738	6.02	1.865	6.449	0.309
2013	2.161	-	2.027	6.702	1.967	8.549	0.293
2014	2.842	1.978	2.789	6.789	1.987	6.789	0.771
2015	2.658	1.673	2.859	5.896	1.789	7.896	0.567

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Source: Author's Calculation based on Unctad.org

Table 2
Annexure. Import Intensity Index between India and Selected African Countries

Year	India and Congo	India and Ethiopia	India and Ghana	India and Mozambique	India and Nigeria	India and Tanzania	India and Zambia
1991	0.000	-	5.869	1.639	1.400	10.446	5.908
1992	0.007	-	0.776	7.128	7.846	12.937	9.876
1993	0.003	0.238	1.613	7.396	9.877	16.160	-
1994	0.010	0.212	1.248	3.195	5.307	9.852	-
1995	0.173	0.149	2.366	7.504	10.131	13.283	-
1996	-	0.046	0.296	8.156	14.870	7.031	-
1997	0.092	0.129	0.337	3.366	7.781	5.822	-
1998	0.781	0.237	0.378	5.695	8.411	11.419	3.654
1999	0.217	2.240	0.507	7.215	33.764	11.877	3.203
2000	0.341	1.178	1.128	4.846	5.947	8.927	1.660
2001	0.488	0.856	0.889	2.023	0.387	6.697	1.553

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Year	India and Congo	India and Ethiopia	India and Ghana	India and Mozambique	India and Nigeria	India and Tanzania	India and Zambia
2002	1.303	0.883	0.893	1.586	0.417	5.063	1.328
2003	2.690	0.954	1.343	2.053	0.479	5.516	1.130
2004	2.035	5.355	1.111	2.358	0.166	5.205	0.911
2005	2.201	0.342	1.535	2.065	0.115	2.813	0.651
2006	10.505	0.351	1.457	1.021	6.467	2.239	0.581
2007	4.202	0.267	1.549	0.659	7.175	1.997	0.506
2008	4.370	0.254	1.685	1.020	7.696	2.462	0.905
2009	1.055	0.156	0.893	0.643	3.035	2.041	0.646
2010	2.975	0.192	0.867	1.325	7.402	2.315	1.287
2011	0.355	0.243	1.606	1.644	6.638	1.584	0.792
2012	0.000	0.214	0.730	0.265	5.330	2.534	0.626
2013	-	0.205	0.625	0.201	5.64	3.853	0.519
2014	1.894	0.894	0.689	0.856	4.789	4.569	0.678
2015	2.187	0.754	0.789	2.789	5.789	3.896	0.789

Source: Author's Calculation based on Unctad.org

Table 3						
Annexure.	Commodities with Revealed Comparative Advantage (RCA) > 1 for India					
	& Select African Countries (2008-2013)					

India	Congo	Ethiopia	Ghana
Petroleum Products (1.164)	Petroleum Products (1.200)	Live Animals (9.321)	Crude Rubber (1.108)
Crude Fertilizers (3.260)	Wood Lumber & Cork (0.981)	Oil Seeds, Oil nuts, Oil Kernels (4.281)	Fish & Fish Preparations (1.316)
Fruits/Vegetables (1.400)	Paper & Paperboard Prep (2.358)	Leather, dressed furskins (15.6)	Tobacco, Tobacco Manufactures (12,701)
Sugar -Sugar Preparations, Honey (2.100)		Essential Oils, Chemicals Materials (4.361)	
Coffee Tea,Cooca, spices etc (3.100)			
Fish & Fish Preparations (0.987)			
Animal Vegetables, Oils- processed (1.360)			
Cereals, Cereals Preparations(1.228)			
Feeding Stuff for animals (1.841)			
Fixed Vegetable Oils (1.211)			

India	Congo	Ethiopia	Ghana
Non Metallic Mineral Manfc (1.32).			
Oil Seeds, Oil nuts, Oil Kernels (0.986)			
Clothing (1.639)			
Footwear (1.720)			
Leather, dressed furskins (2.098)			
Textile yarn Fabrics (4.577)			
Iron & Steel (1.358)			
Electrical Machinery (1.390)			
Chemical Materials (1.030)			
Dying Tanning and colouring Materials (1.980)			
Medical Pharmaceuticals (2.350)			
Essential Oils, Chemicals Materials (1.471)			
Mozambique	Nigeria	Tanzania	Zambia
Gas & Natural Gas Manufactures (3.460)	Gas & Natural Gas Manufactures (3.360)	Petroleum Products (6.023)	Sugar, Sugar Preparations, honey (1.021)
Sugar -Sugar Preparations, Honey (9.374)	Coffee Tea,Cooca, spices etc (9.737)	Coffee Tea,Cocoa, spices etc (4.790)	Animal Vegetable Oils, Processed (1.211)
Feeding Stuff for animals (0.987)	Tobacco, Tobacco Manufactures (1.267)	Fish & Fish Preparations (8.527)	Manufactures of metal (1.611)
Animal Oils and Fats (0.987)	Leather, dressed furskins (5.973)	Hides, Skins & Furskins (2.576)	Essential Oils, Perfume materials (1.021)
		Animal Vegetables, Oils- processed (8.271)	Chemicals Materials (1.023)
		Cereals, Cereals Preparations (2.378)	
		Feeding Stuff for animals (1.871)	
		Tobacco, Tobacco Manufactures (9.168)	
		Dying Tanning and colouring Materials (1.440)	
		Essential Oils, Chemicals Materials (1.02)	

		· /	
India	Congo	Ethiopia	Ghana
Petroleum Products (8.555)	Sugar -Sugar Preparations, Honey (1.44)	Petroleum Products (3.486)	Petroleum Products (1.004)
Crude Fertilizers (1.211)	Diary Products (1.839)	Paper & Paperboard Prep (1.01)	Sugar -Sugar Preparations, Honey (7.803)
Crude Materials (1.056)	Cereals, Cereals Preparations (2.414)	Sugar -Sugar Preparations, Honey (5.701)	Crude Rubber (2.087)
Coal Coke Briquettes (5.243)	Fixed Vegetable Oils (2.77)	Crude Rubber (2.427)	Dairy Products (3.018)
Sugar -Sugar Preparations, Honey (0.987)	Iron & Steel (1.075)	Animal and Vegetable Oil Processed (5.532)	Fish, Fish Prep. (3.098)
Wood lumber Cork (1.234)	Electrical Machinery (1.751)	Cereal and Cereal Prep (1.818)	Animal and Vegetable Oil Processed (1.212)
Pulp, Waste Paper (1.432)	Chemical Elements (1.543)	Oil Seeds, Oil nuts, Oil Kernels (1.027)	Cereals, Cereals Preparations (2.014)
Oil Seeds, Oil nuts, Oil Kernels (0.973)	Essential Oils, Chemicals Materials (0.781)	Clothing (1.363)	Tobacco, Tobacco Manf. (1.168)
Animal and Vegetable Oil Processed (1.011)		Rubber Manufactures (2.427)	Oil Seeds,oilnuts, Oil Kernels (3.005)
Fixed Vegetable Oils (2.115)		Textile Yarn (1.696)	Fixed Vegetable Oils (4.118)
Iron & Steel (1.021)		Iron & Steel (1.566)	Furniture (1.01)
Chemical Elements (2.236)		Transport Equipment (6.253)	Travel Goods, handbags etc (1.134)
Dying Tanning and colouring Materials (1.0234)		Dying Tanning & Colouring Material (7.303)	Footwear(1.421)
Fertilizers		Essential Oils, Chemicals Materials (2.363)	Misc. Manufactures Articles (1.585)
Non metallic mineral manf. (2.01)			
Chemical Materials (1.02)		Fertiliser Manufactures (9.673)	Rubber Manf (2.087).
		Plastic Materials (1.101)	Iron and Steel (2.251)

# Table 4Annexure. Commodities with Revealed Import Dependence (RID) >1 for India<br/>& Select African Countries (2008-2013)

Manuf.. Of metals(1.462)

India	Congo	Ethiopia	Ghana
			Transport Equipment (4.324)
			Essential Oils, Chemicals
			Materials (1.614)
			Fertiliser Manufactures
			(1.211)
Mozambique	Nigeria	Tanzania	Zambia
Petroleum Products	Paper & Paper Boards	Petroleum Products	Coal, coke Briquettes
(2.772)	(1.55)	(5.485)	(1.043)
Sugar -Sugar Preparations, Honey (1.895)	Sugar -Sugar Preparations, Honey (4.354)	Wood, Lumber Cork (1.02)	Meat, Meat Prep (1.052)
Crude Rubber (1.327)	Crude Rubber (1.906)	Sugar -Sugar Preparations, Honey (5.9270	Diary Products (1.009)
Hides, Skins, Furskins (1.432)	Live Animals (1.210)	Crude Rubber (4.059)	Animal and Vegetable Oil Processed (1.306)
Animal and Vegetable Oil	Diary Products	Animal and Vegetable Oil	Tobacco, Tobacco Manf.
Processed (1.33)	(4.827)	Processed (2.7810	(27.022)
Feeding Stuff for animals	Fish, Fish Prep.	Cereals, Cereals	Animal Oils and fats
(2.372)	(5.61)	Preparations (1.621)	(1.022)
Tobacco, Tobacco Manf.	Animal and Vegetable Oil	Fixed Vegetable Oils	Fixed Vegetable Oils
(1.02)	Processed (5.464)	(10.75)	(1.344)
Oil Seeds,oilnuts, Oil Kernels (1.522)	Feeding Stuff for animals (6.384)	Clothing (1.128)	Non-metallic mineral manufactures (1.002)
Animal Oils and fats	Oil Seeds,oilnuts, Oil	Footwear (1.349)	Travel Goods, handbags
(1.22)	Kernels (16.87)		etc (2.344)
Furniture (2.734)	Animal Oils and fats	Rubber Manufactures	Leather dressed furskins
	(5.427)	(4.051)	(2.921)
Iron and Steel (1.327)	Leather, dressed furskins (1.179)	Iron and Steel (1.321)	Textile Yarn (2.827)
Travel Goods, handbags etc (1.02)	Rubber Manufactures (1.906)	Manufactures of Metal (1.147)	Iron and Steel (1.631)
Chemical Elements(3.603)	Transport Equipment (2.203)	Sanitary, fixtures, fitting (1.743)	Electric Machinery (6.584)
Mineral Tar & Crude Chemicals (1.211)	Dying Tanning & Colouring Material (6.643)	Transport Equipment (3.206)	Plastic Materials (1.089)
Fertilizers Manufactures (1.02)	Plastic Materials (1.189)	Essential Oils, Chemicals Materials(4.061)	
Plastic Materials (3.311)		Fertilizers Manufactures (3.357)	
		Plastic Materials (1.828)	

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