

International Trade: Reviewing Relative Competency Index of BRICS Countries

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ABSTRACT

International Trade has always attracted the development of new economic theories and models. Strengths and weakness of economies could be identified from the export performance and import statistics. Earnings in foreign exchange have been regarded as a strong measure of favourable Balance of Payment and Balance of Trade. This paper attempts to describe the international trade performance of BRICS countries using Relative Comparative Advantage Index [RCAI]. Each country shall be identified with varied capacity of resources and strength. Chinese economy outperforms others in Machines and Electronics whereas India has a relative advantage in Chemicals and few other segments. Prospects of consolidated advantage remain though strong internal competition for supremacy is a reality.

1. Introduction

International Trade has always attracted the development of new economic theories and models. Strengths and weakness of economies could be identified from the export performance and import statistics. Earnings in foreign exchange have been regarded as a strong measure of favourable Balance of Payment and Balance of Trade.

2. Methodology

The paper uses secondary data collected from WITS and presents the same in analytical tables to comprehend the international trade performance of BRICS countries.

3. Revealed Comparative Advantage Index

Measures of revealed comparative advantage (RCA) have been used to help assess a country's export potential. The RCA indicates whether a country is in the process of extending the products in which it has a trade potential, as opposed to situations in which the number of products that can be

4. RCA of BRICS countries

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 intraindustry trade is involved. RCA measures, if estimated at high levels of product disaggregation, can focus attention on other nontraditional products that might be successfully exported. The RCA index of country *i* for product *j* is often measured by the product's share in the country's exports in relation to its share in world trade:

$$RCA_{ij} = (x_{ij}/X_{it}) / (x_{wj}/X_{wt})$$

Where *x_{ij}* and *x_{wj}* are the values of country *i*'s exports of product *j* and world exports of product *j* and where *X_{it}* and *X_{wt}* 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.

Table-1
RCAI of BRICS countries in 2012

COMMODITY	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
Animal	3.27	0.54	1.04	0.33	0.39
Chemicals	0.59	0.54	1.4	0.49	0.5
Food Products	4.12	0.29	0.89	0.34	0.91
Footwear	0.73	0.03	1.5	3.93	0.19
Fuels	0.55	3.58	0.84	0.04	0.42
Hides and Skins	1.52	0.13	2.47	2.77	0.59
Mach and Elec	0.28	0.07	0.39	2.08	0.25
Metals	0.97	1.22	1.09	0.95	1.29
Minerals	10.48	0.72	1.5	0.13	5.38
Miscellaneous	0.38	0.6	0.34	1.33	3.19
Plastic or Rubber	0.57	0.3	0.63	0.81	0.35
Stone and Glass	0.36	0.58	3.66	0.7	4.51

Textiles and Clothing	0.4	0.04	3.31	2.67	0.25
Transportation	0.74	0.12	0.55	0.32	0.77
Vegetable	4.68	0.52	2.27	0.24	1.19
Wood	1.83	0.93	0.25	0.71	0.73

Source: Compiled from www.wits.worldbank.org

Considering the values for 2012, Minerals leads the export basket of Brazil while its fuels and metals for Russia. Brazil was also found strong with vegetables, food products and animals. Stones, Glass, Textiles, Vegetables, Hides and Skins lead the

basket of India. China with a similar basket with that of India outperforms all others in Machines and Electronics. South Africa also is found strong in Minerals, Stone and Glass.

Table-2
RCAI of BRICS countries in 2013

COMMODITY	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
Animal	3.52	0.51	1.17	0.31	0.34
Chemicals	0.59	0.53	1.43	0.48	0.56
Food Products	4.08	0.32	0.77	0.31	0.92
Footwear	0.71	0.05	1.57	3.69	0.19
Fuels	0.42	3.79	0.93	0.04	0.36
Hides and Skins	1.81	0.15	2.44	2.55	0.61
Mach and Elec	0.26	0.08	0.37	2.1	0.24
Metals	0.85	1.18	1.18	0.98	1.32
Minerals	10.19	0.64	1	0.12	5.61
Miscellaneous	0.35	0.51	0.28	1.31	2.95
Plastic or Rubber	0.53	0.3	0.65	0.82	0.33
Stone and Glass	0.47	0.73	3.44	0.63	4.73
Textiles and Clothing	0.29	0.04	3.36	2.59	0.23
Transportation	0.8	0.12	0.5	0.31	0.76
Vegetable	5.41	0.42	2.13	0.24	1.32
Wood	1.95	0.92	0.25	0.69	0.67

Source: Compiled from www.wits.worldbank.org

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Table-3
RCAI of BRICS countries in 2014

COMMODITY	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
Animal	3.38	0.51	1.38	0.3	0.34
Chemicals	0.57	0.54	1.46	0.5	0.51
Food Products	3.79	0.34	0.71	0.3	0.93
Footwear	0.68	0.05	1.65	3.34	0.2
Fuels	0.57	3.93	0.84	0.05	0.37
Hides and Skins	2.14	0.14	2.55	2.34	0.65
Mach and Elec	0.24	0.07	0.36	2.03	0.25
Metals	0.93	1.29	1.21	1.07	1.39
Minerals	10.03	0.64	0.95	0.12	5.77
Miscellaneous	0.37	0.57	0.29	1.3	2.69
Plastic or Rubber	0.51	0.29	0.64	0.83	0.36
Stone and Glass	0.57	0.75	3.94	0.66	5.35
Textiles and Clothing	0.26	0.05	3.31	2.43	0.23
Transportation	0.63	0.11	0.56	0.3	0.8
Vegetable	5.36	0.62	2.09	0.22	1.37
Wood	2.09	1.02	0.25	0.69	0.77

Source: Compiled from www.wits.worldbank.org

Considering the values for 2014, Minerals leads the export basket of Brazil while its fuels and metals for Russia. Brazil was also found strong with vegetables, food products and animals. Wood also has emerged as a considerable item for Brazil.

Stones, Glass, Textiles, Vegetables, Hides and Skins lead the basket of India. China with a similar basket with that of India outperforms all others in Machines and Electronics. South Africa also is found strong in Minerals, Stone and Glass.

Table-4
RCAI of BRICS countries in 2015

COMMODITY	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
Animal	3.58	0.68	1.43	0.28	0.4
Chemicals	0.57	0.62	1.55	0.47	0.49
Food Products	3.55	0.39	0.7	0.28	0.92
Footwear	0.65	0.06	1.63	2.98	0.19
Fuels	0.68	5.05	0.83	0.07	0.65
Hides and Skins	2	0.13	2.51	2.15	0.64
Mach and Elec	0.23	0.08	0.34	1.9	0.24
Metals	1.04	1.54	1.23	1.05	1.45
Minerals	9.33	0.78	0.95	0.15	6.29
Miscellaneous	0.36	0.6	0.32	1.21	0.2
Plastic or Rubber	0.54	0.35	0.63	0.79	0.32
Stone and Glass	0.54	0.68	3.63	0.51	8.16
Textiles and Clothing	0.27	0.05	3.35	2.22	0.23
Transportation	0.7	0.14	0.55	0.28	0.93
Vegetable	5.47	0.76	1.97	0.22	1.46
Wood	2.49	1.38	0.27	0.67	0.84

Source: Compiled from www.wits.worldbank.org

Considering the values for 2015, Minerals leads the export basket of Brazil while its fuels and metals for Russia. Brazil was also found strong with vegetables, food products, animals and wood. Stones, Glass, Textiles, Vegetables, Hides and Skins

lead the basket of India. China with a similar basket with that of India outperforms all others in Machines and Electronics. South Africa also is found strong in Minerals, Stone and Glass.

Table-5
RCAI of BRICS countries in 2016

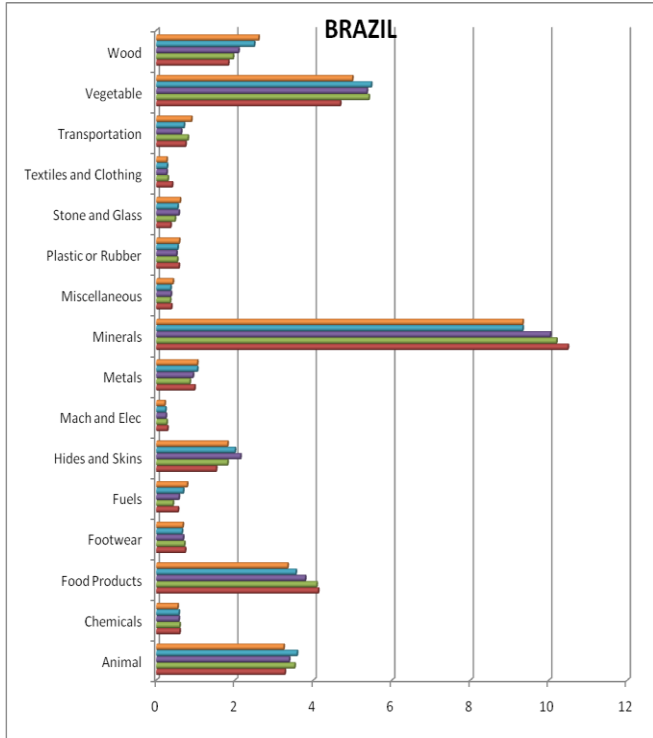
COMMODITY	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
Animal	3.24	0.89	1.3	0.31	0.41
Chemicals	0.54	0.56	1.59	0.48	0.41
Food Products	3.34	0.4	0.6	0.3	0.86
Footwear	0.67	0.07	1.64	2.95	0.15
Fuels	0.78	5.72	0.86	0.09	0.67
Hides and Skins	1.81	0.14	2.58	2.22	0.61
Mach and Elec	0.21	0.08	0.31	1.83	0.19
Metals	1.04	1.8	1.13	1.07	1.39
Minerals	9.33	0.87	1.12	0.13	6.54
Miscellaneous	0.42	0.47	0.32	1.23	0.18
Plastic or Rubber	0.58	0.39	0.6	0.82	0.27
Stone and Glass	0.6	0.97	4.41	0.46	7.85
Textiles and Clothing	0.26	0.06	3.19	2.26	0.25
Transportation	0.89	0.11	0.49	0.27	1.05
Vegetable	4.99	0.74	1.46	0.24	1.54
Wood	2.6	1.66	0.25	0.72	0.83

Source: Compiled from www.wits.worldbank.org

Considering the values for 2016, Minerals leads the export basket of Brazil while its fuels and metals for Russia. Brazil was also found strong with vegetables, food products, animals and wood. Stones, Glass, Textiles, Vegetables, Hides and Skins

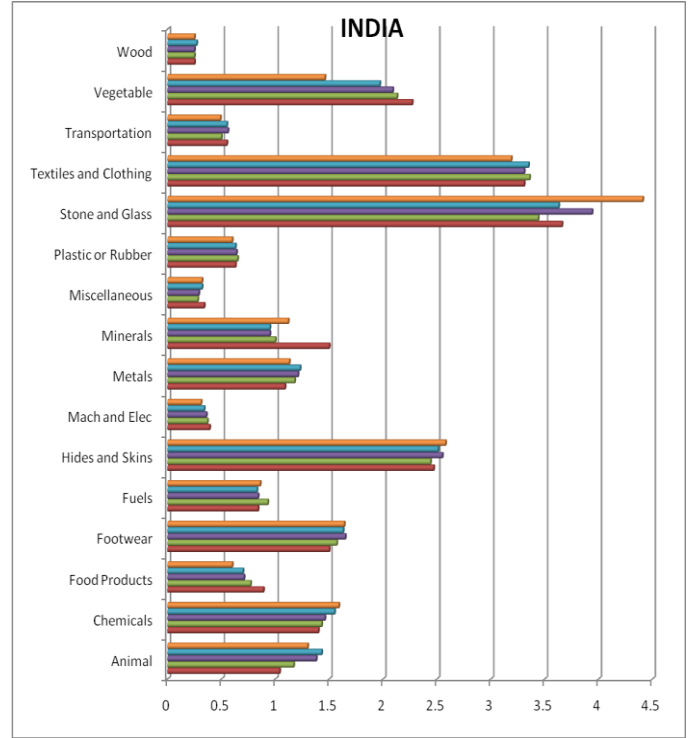
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Diagram 1
RCAI of Brazil



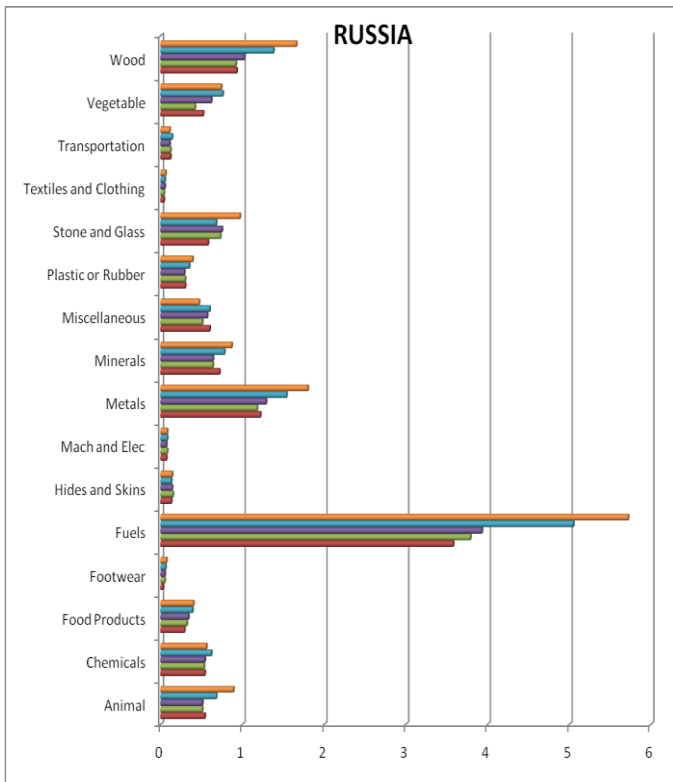
Source: Compiled from Tables 1-5

Diagram 3
RCAI of India



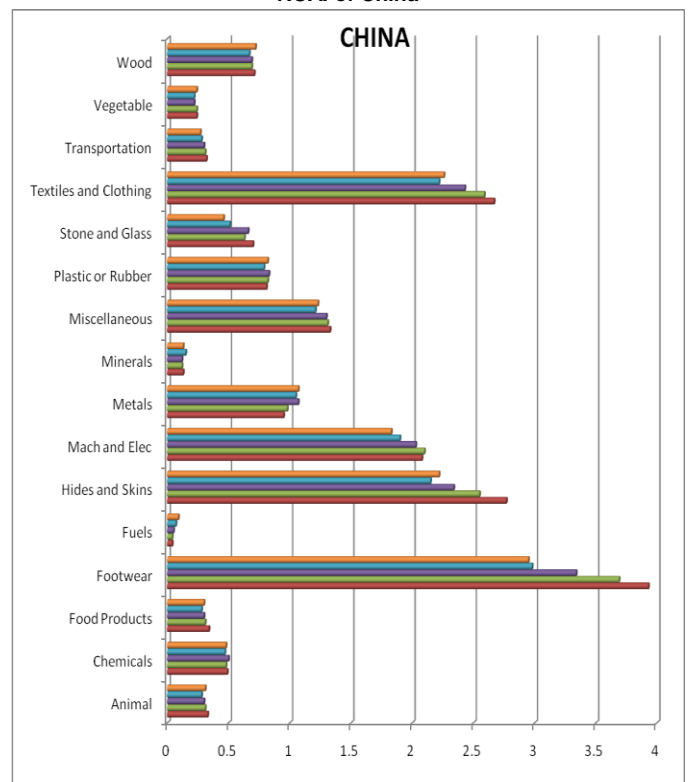
Source: Compiled from Tables 1-5

Diagram 2
RCAI of Russia



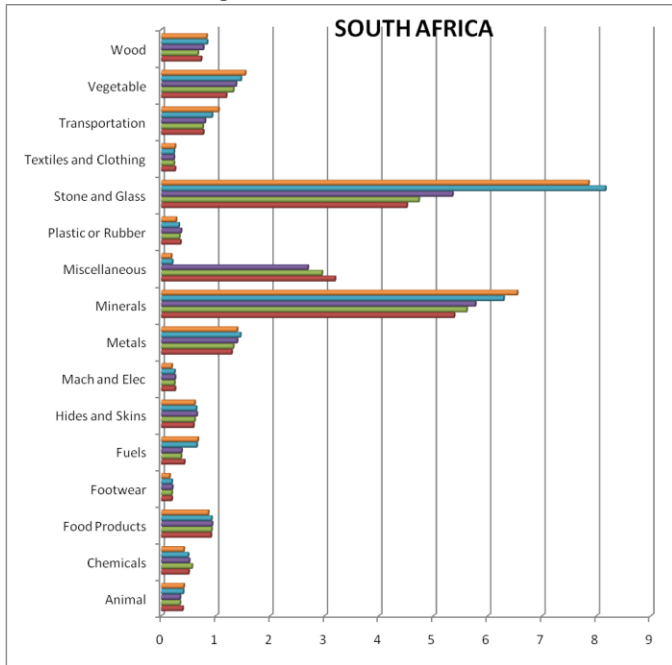
Source: Compiled from Tables 1-5

Diagram 4
RCAI of China



Source: Compiled from Tables 1-5

Diagram 5 RCAI of South Africa



Source: Compiled from Tables 1-5

5. Overall Analysis

The competitive advantage of Brazil in minerals is found to be falling, while the same for South Africa is found to improve. China’s advantage over Machines and Electronics is also found to fluctuate year over year. India is found to dominate the other four in RCAI of Chemicals. South Africa is a strong contestant for India’s competitive advantage in Stones and Glass.

6. Conclusion

India’s competitive advantage in international needs to scale up in technology and demographic dividend. The present dominance found in textiles is found to be leveraging upon the migration to other countries. Whereas, the Chinese impact is not in that route. Policy initiatives, logistics, and better forex management can improve India’s position and the BRICS can rule the world economy at large considering the consolidation of resources and power over the market. But, when internal competition for power and supremacy is a reality, technical consolidation is yet to dream of.

References

1. www.wits.worldbank.org
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