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# THE IMPACT OF EMERGING MARKETS (BRICs) ON CARICOM

*Roger Hosein\* and Jeetendra Khadan<sup>§</sup>*

**Abstract.** This paper provides a detailed outline of the economic progress of Brazil, Russia, India and China (BRICs) and its implications for the Caribbean Community (CARICOM). BRICs have been identified as four emerging markets with the ability to surpass the present G6 countries by 2050 in terms of their combined Gross Domestic Product (GDP). This has significant implications for developing countries in terms of their trade and investment outlook. The share of BRICs GDP in world GDP is now close to 18% and their outbound investments have increased significantly in the past decade. CARICOM economies are presently net importers from BRICs; as such this paper outlines various export opportunities for CARICOM by utilizing several trade indices and also identifies other complementary growth effects for CARICOM from the growth of BRICs.

## Introduction

The rapid growth of BRICs in the recent past has created a new engine for global economic growth. BRICs were first recognized as a potential economic superpower in a 2001 Goldman and Sachs report based on GDP predictions and factors such as macro stability, institutions, openness and education (Bell, 2011). BRIC economies share several common characteristics. Most important of which is their large size in terms of land mass and human capital potential. BRICs presently account for approximately 42% of the world's population with approximately 37% residing in China and India and 4.8% in Brazil and Russia. da Silva *et al.* (2010) have argued that the causes of recent economic growth for BRIC

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economies are common to all four and originate from their relatively low labour costs which attract a significant portion of export oriented foreign direct investment (FDI) into their economies.

Cassiolato and Lundvall (2006) also noted that the growth pattern of BRICs are becoming more interdependent as China is responsible for falling prices in many labour-intensive products while India's growth has placed upward pressure on petroleum prices. Moreover, Cassiolato and Lundvall (2006) noted that China's rise to prominence has created additional benefits for developing countries by increasing demand and prices for their commodities, particularly in raw materials and energy.

The emergence of BRICs has helped to change the economic landscape in the global economy by opening new economic spaces for developing countries. Wilson and Purushothaman (2003) projected that in the next few decades BRICs is likely to replace the present G7.<sup>1</sup> Economic relations between BRICs and CARICOM have historically been low. In particular, CARICOM's major trade and investment partners in the world are countries in North America and Europe.

However, these countries are facing significant economic and fiscal challenges which are likely to have a domino effect on CARICOM and other developing countries where economic growth is externally driven. Therefore, as BRICs share in the global economy increases many developing countries may become more dependent on the growth of BRICs to stimulate external demand for exports.

Many emerging economies has an expanding productive skills set that has significant production capabilities especially in the context of rapid innovation and technological advancements. Rao (2008) underscored that despite the relatively low literacy and educational attainment rates in China, India and Brazil, combined BRICs do have a large and growing pool of well-educated individuals that would boost their workforce in the next decade. Rao (2008) also noted that BRICs, through improvements in education, investments in research and development and international collaboration is moving in the right direction to become leaders in

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<sup>1</sup> The G7 represents the 7 largest economies in the world. The present G7 members are Canada, France, Germany, Italy, Japan, United Kingdom and the United States.

innovation. This in itself also has the potential to attract further FDI and boost growth in these economies.

Additionally, BRICs are rapidly becoming a major source of outbound FDI and this can serve to stimulate economic activity in developing countries. Moreover, the projected increase in the middle class of BRICs is also an avenue to further boost the tourism inflows in developing countries and stimulate demand for raw materials as well as consumer goods.

Thus, including BRICs in policymaking for CARICOM countries and other developing countries is a worthwhile exercise. As the process of globalization unfolds and BRICs dominance take root in the global economy it may become necessary for CARICOM countries to design and implement appropriate strategies to diversify their trade markets into emerging economies as well as to adjust their production structures and supportive institutions to ensure they capitalize on the growth in emerging markets.

The purpose of this paper is to deepen our understanding of the growth of BRICs, identify possible challenges that CARICOM may encounter as well as how the ensuing growth of emerging economies can feature more in CARICOM's economic development. The rest of this paper is structured as follows:

The next section reviews the growth of BRIC countries by identifying their individual strengths in the global economy followed by a discussion of the world economy in 2050.

The following sections assess BRICs impact on global merchandise trade, CARICOM-BRIC trade relations, tourism and FDI, respectively. The paper then closes with a discussion on the potential opportunities and challenges for CARICOM countries.

## **BRICs: A New Engine for Global Growth**

The GDP (current US\$) of BRIC countries reported an upward trend over the period 1991-2010. In particular, Brazil, Russia and India experienced an increase in GDP of 412.6%, 190.5% and 546.4%, respectively. Notably of the four BRIC countries, the Chinese economy experienced the largest increase in GDP over the period from US\$379.5mn to US\$5,878.6m; an increase of

1,449%. Amidst the large increases in GDP both Brazil and China has managed to maintain a low inflation rate while Russia's inflation rate decreased for the last decade from 20.8% in 2000 to 6.9% in 2010. India was the only BRIC economy that experienced a rise in inflation over the last decade from 4% in 2000 to 12% in 2010 (Table 1).

Table 2 provides a comparison of the growth of BRIC economies in relation to other major economies such as top members of the G6.<sup>2</sup> The information shows that BRICs enjoyed favourable increases in economic growth until 2008 (excluding Russia for the period 1991-1998) when Brazil and Russia together with the United States of America (USA), Japan and the United Kingdom (UK) experienced negative growth. This may have been due to the economic and financial challenges facing many developed countries.

**Table 1**  
**Macroeconomic Overview of BRICs**

	1991	2000	2005	2008	2009	2010
<b>GDP (current US\$bn)</b>						
Brazil	407.30	644.70	882.20	1652.60	1594.50	2087.90
Russia	509.40	259.70	764.00	1660.80	1222.00	1479.80
India	267.50	460.20	834.00	1213.80	1380.60	1729.00
China	379.50	1198.50	2256.90	4521.80	4991.30	5878.60
<b>GDP per capita (constant 2000 US\$)</b>						
Brazil	3347.80	3696.20	3976.70	4478.50	4410.40	4699.40
Russia	2465.40	1775.10	2443.00	3043.70	2807.80	2923.10
India	315.50	453.00	588.80	711.90	766.40	829.70
China	421.90	949.20	1464.10	2032.60	2208.40	2423.30
<b>Inflation, Consumer Prices (annual %)</b>						
Brazil	432.80	7.00	6.90	5.70	4.90	5.00
Russia	-	20.80	12.70	14.10	11.70	6.90
India	13.90	4.00	4.30	8.40	10.90	12.00
China	3.50	0.30	1.80	5.90	-0.70	3.30
<b>Unemployment, total (% of total labour force)</b>						
Brazil	-	-	9.30	7.10	8.30	-
Russia	-	10.60	7.10	6.30	8.20	-
India	-	4.30	4.40	-	-	-
China	2.30	3.10	4.20	4.20	4.30	-

Source: World Development Indicators (2011)

**Table 2**  
**Comparison of BRICs Growth in GDP (%)**  
**with other Major Economies**

	<b>Brazil</b>	<b>Russia</b>	<b>India</b>	<b>China</b>	<b>USA</b>	<b>Japan</b>	<b>UK</b>
1991	1.51	-5.05	1.06	9.20	-0.26	3.32	-1.39
1992	-0.47	-14.53	5.48	14.20	3.41	0.82	0.15
1993	4.67	-8.67	4.77	14.00	2.87	0.17	2.22
1994	5.33	-12.57	6.65	13.10	4.11	0.86	4.28
1995	4.42	-4.14	7.57	10.90	2.55	1.88	3.05
1996	2.15	-3.60	7.56	10.00	3.79	2.64	2.89
1997	3.37	1.40	4.05	9.30	4.51	1.56	3.31
1998	0.04	-5.30	6.19	7.80	4.40	-2.05	3.61
1999	0.25	6.40	7.39	7.60	4.87	-0.14	3.47
2000	4.31	10.00	4.03	8.40	4.17	2.86	3.92
2001	1.31	5.09	5.22	8.30	1.09	0.18	2.46
2002	2.66	4.74	3.77	9.10	1.83	0.26	2.10
2003	1.15	7.30	8.37	10.00	2.50	1.41	2.81
2004	5.71	7.18	8.28	10.10	3.58	2.74	2.95
2005	3.16	6.38	9.32	11.30	3.06	1.93	2.17
2006	3.96	8.15	9.27	12.70	2.67	2.04	2.79
2007	6.09	8.54	9.82	14.20	1.94	2.36	2.68
2008	5.16	5.25	4.93	9.60	-0.02	-1.17	-0.07
2009	-0.64	-7.81	9.10	9.20	-2.67	-6.29	-4.87
2010	7.49	4.03	9.72	10.30	2.85	5.12	1.25

*Source: World Development Indicators (2011)*

Note though, that China and India continued to record positive growth for the entire period and Brazil and Russia returned to positive growth by 2010. In particular Brazil, India and China recorded the largest increase in economic growth among the listed countries in 2010. Furthermore, BRICs continue to increase their share in world output during the last decade. Specifically, BRICs contribution to world GDP more than doubled from 8% in 2000 to 17.7% in 2010. Simultaneously, the share of other major economies in world GDP such as Japan, USA and the UK declined for the same period. Notably, Japan and the USA had a larger share in world GDP at the start of the period but the BRICs managed to surpass Japan in 2005

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<sup>2</sup> The G6 represents the 6 largest economies in the world. The present G6 members are France, Germany, Italy, Japan, United Kingdom and the United States.

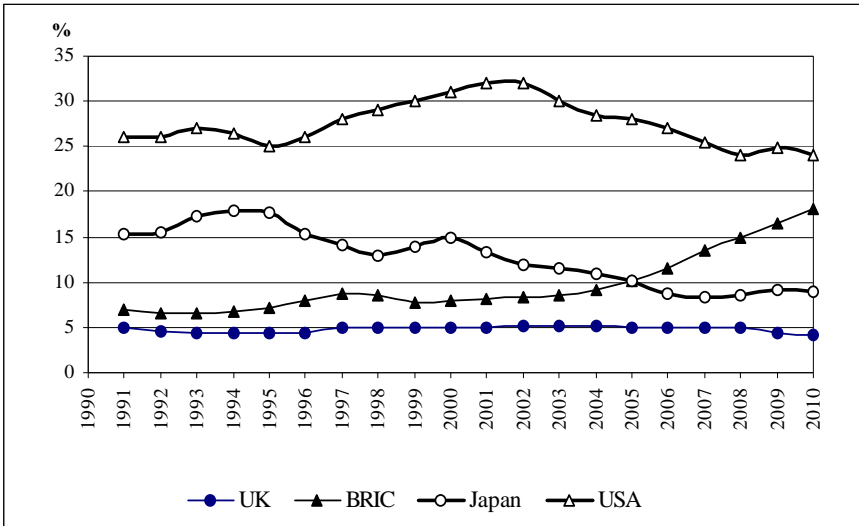
and given its current trend may soon overtake the USA. This is consistent with predictions made by Wilson and Purushothaman (2003).

Brazil, India and China have experienced remarkable progress in reducing poverty in the last three decades through buoyant economic growth and various policy reforms. Ravallion (2009) noted that the number of persons living below \$1.25 per day declined from 84% of the population in 1981 to 16% in 2005 at purchasing power parity (PPP) 2005 prices. This is an exceptional achievement for China as the percentage of its population living in poverty is now less than the average for the developing world which is 26%.

For the same period Brazil also recorded a substantial reduction in poverty from 17% to 8% while India's declined from 60% in 1981 to 42% in 2005 using the same poverty line. The World Bank (2011) also reported positive results for Russia indicating that its poverty rate fell from 15.2% in 2006 to 13.3% in 2010 and is projected to decline further in 2012 to 10%. Ravallion (2009) explained that China's success in poverty reduction occurred largely from pro-poor poverty reducing market-led economic growth while for Brazil it occurred mainly through social policies.

Ravallion (2009) suggested that the Indian economy can certainly learn from the experiences of China and Brazil by enabling its poorer class to play a greater role in the country's growth process in the case of the former and social policies as in the case of the latter to further reduce poverty.

**Figure 1**  
**BRICs, USA, Japan and the UK Contribution to World GDP**



*Source: World Development Indicators (2011)*

Although BRICs have a large share in world output and declining poverty, present members of the G6 are much wealthier than BRICs on a per-capita basis. In particular, the USA recorded the highest GDP per-capita PPP, for the period followed by the UK and Japan. In terms of individual BRIC members, Russia reported the largest GDP per-capita, PPP which was almost three times lower than that of the USA. Brazil and Russia appear to be the wealthiest of the BRICs in terms of GDP per capita PPP (Table 3).

The projected growth of BRICs in the coming decades would certainly trigger an expansion in their middle class. At present, only China is recorded in the top seven countries shifting towards middle income countries but by 2030 all four are projected to be among the top seven middle income countries in the world (Table 4).



**Table 3**  
**GDP Per Capita, PPP (Constant 2005 International \$)**

	<b>Brazil</b>	<b>Russia</b>	<b>India</b>	<b>China</b>	<b>USA</b>	<b>Japan</b>	<b>UK</b>
1991	7164	11962	1232	1186	31420	26914	23295
1992	7018	10219	1276	1338	32042	27067	23266
1993	7233	9344	1312	1507	32531	27046	23726
1994	7503	8179	1374	1686	33457	27187	24678
1995	7716	7851	1452	1849	33903	27593	25364
1996	7762	7589	1535	2013	34780	28248	26030
1997	7903	7718	1569	2178	35912	28615	26822
1998	7787	7329	1638	2325	37058	27958	27708
1999	7692	7829	1729	2480	38419	27866	28575
2000	7909	8613	1769	2667	39578	28613	29588
2001	7902	9073	1832	2868	39602	28603	30206
2002	8003	9546	1871	3108	39944	28611	30726
2003	7990	10292	1998	3398	40588	28953	31461
2004	8344	11088	2133	3719	41653	29738	32227
2005	8509	11853	2300	4115	42534	30310	32732
2006	8753	12878	2479	4611	43257	30933	33438
2007	9196	14016	2686	5239	43660	31660	34116
2008	9583	14767	2781	5712	43250	31307	33868
2009	9438	13623	2993	6206	41735	29372	32004
2010	10056	14183	3241	6810	42642	30903	32187

*Source: World Development Indicators (2012)*

O'Neill *et al.* (2004) noted that the BRICs middle class is expected to increase four fold in the next decade with approximately 800 million individuals surpassing the US\$3000 benchmark. Individually, China's middle class is projected to increase tenfold, India's fourteen fold and Brazil and Russia twofold, respectively in the next decade. This provides a substantial new market of consumers with improved spending power for small developing countries like CARICOM to exploit. The growth that BRIC economies have experienced in the past has also been accompanied by relative changes in their production structure. Table 5 illustrates some of these changes. The data shows that the relative size of the agricultural sector for Brazil, Russia and India contracted continuously from 1960 to 2010. On the other hand, China's agricultural sector expanded between 1960 and 1970 but declined afterwards from 35.2% in 1970 to a mere 9.5% in 2010.

**Table 4**  
**Top Seven: Shifting Towards**  
**Middle Income Countries**

<b>1980</b>	<b>GDP Rank</b>	<b>Income Rank</b>	<b>2030</b>	<b>GDP Rank</b>	<b>Income Rank</b>
US	1	12	China	1	49
Japan	2	19	US	2	12
Germany	3	17	India	3	63
France	4	9	Japan	4	29
UK	5	18	Brazil	5	47
Italy	6	21	Russia	6	35
Canada	7	15	Germany	7	22
<b>2007</b>	<b>GDP Rank</b>	<b>Income Rank</b>	<b>2050</b>	<b>GDP Rank</b>	<b>Income Rank</b>
US	1	9	China	1	45
Japan	2	22	US	2	15
Germany	3	16	India	3	61
China	4	56	Brazil	4	46
UK	5	10	Russia	5	28
France	6	17	Indonesia	6	60
Italy	7	20	Mexico	7	44

*Source: Wilson and Dragusanu (2008)*

Brazil and Russia were the only two BRIC economies that experienced significant declines in their industrial sectors contribution to GDP. In particular, Brazil's declined from 37.1% in 1960 to 26% in 2010 while Russia's fell from 48.5% in 1990 to 32.8% in 2010. India was the only BRIC economy that experienced significant growth in its industrial sector from 19.6% in 1960 to 28.4% in 2010. The relative size of the manufacturing sector for Brazil increased from 29.6% in 1960 to 33.5% in 1980 following which there was a continuous decline to 16.1% in 2010. A similar pattern in the manufacturing sector was observed for China, India and Russia but in the case of the three latter countries the decline was marginal. The services sector of all four BRIC economies expanded significantly from 1960 to 2010. In particular, Russia's services sector experienced the sharpest increase almost doubling from 1980 to 2010. Among the BRIC economies Brazil has the largest growing services sector followed by Russia, India and China (see Table 5).

**Table 5**  
**Structure of BRIC Economies (% GDP)**

	1960	1970	1980	1990	2000	2010
<b>Agriculture</b>						
Brazil	20.6	12.4	11.0	8.1	5.6	6.0
Russia	-	-	-	16.61	6.43	4.7
India	42.8	42.3	35.7	29.3	23.4	16.2
China	22.3	35.2	30.2	27.1	15.1	9.5
<b>Industry</b>						
Brazil	37.1	38.3	43.8	38.7	27.7	26.0
Russia	-	-	-	48.35	37.95	32.81
India	19.6	20.8	24.7	26.9	26.2	28.4
China	44.9	40.5	48.2	41.3	45.9	44.6
<b>Manufacturing</b>						
Brazil	29.6	29.3	33.5	-	17.2	16.1
Russia	-	-	-	-	17.08	15.02
India	14.1	14.2	16.7	16.7	15.6	16.0
China	-	33.8	40.2	32.7	32.1	32.4
<b>Services</b>						
Brazil	42.3	49.4	45.2	53.2	66.7	68.1
Russia	-	-	-	35.04	55.62	62.49
India	37.6	36.9	39.6	43.8	50.5	55.4
China	33	24.3	21.6	31.5	39	45.9

*Source: World Development Indicators (2011)*

These trends infer that the transformation of BRIC economies over the past decades has resulted in an increased importance on their services sector. The transformation of BRICs over the past decades can also be observed through changes in their employment shares. Employment in the services sector increased considerably from 41% in 1990 to 62% in 2009 for Russia, from 13% in 1980 to 33% in 2008 for China and from 46% in 1981 to 61% in 2009 for Brazil.<sup>3</sup> Simultaneous declines in employment were also recorded for the agricultural sector and industrial sector. It should be noted however that China recorded the largest decline in employment in the agricultural sector but was also the only BRIC member to experience increased employment in its industrial sector from 18% in 1980 to 27% in 2008 (World Development Indicators, 2012).

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<sup>3</sup> Employment data on the Indian economy were sketchy but one can reasonably assume similar changes.

## The World Economy in 2050

The last decade has been described as the BRIC decade and appropriately so as BRIC members as well as other emerging economies increased their share in world GDP growth. In particular, Wilson *et al.* (2010) noted that BRICs share in the world economy in PPP terms increased from one-sixth to almost a quarter over the last ten years.

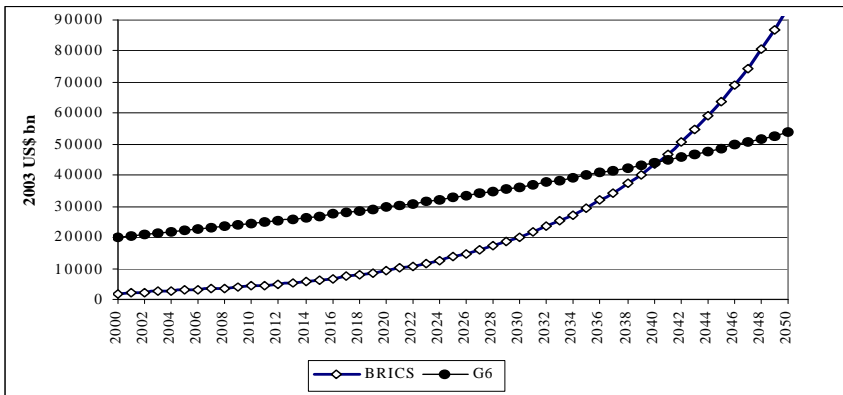
Additionally, the combined strength of BRICs in the global economy is clearly illustrated by their increased participation in world trade. Specifically, BRICs share in world trade more than doubled in the last decade. Many economic pundits argue that by the year 2050 there will be a “seismic shift” in the global economy as BRICs and other emerging economies are likely to replace the major developed economies in the world today (Ward, 2011). Extrapolations and projections about what the world economy would present in 2050 have been made by several institutions including Goldman and Sachs, PricewaterhouseCoopers (PwC) and Hong Kong and Shanghai Banking Corporation (HSBC). Interestingly, their predictions infer that the growth of emerging markets such as Brazil, Russia, India and China will continue in the next few decades and will even be more pronounced as compared to the last decade.

Wilson and Purushothaman (2003) using a long term growth model and an exchange rate model forecasted GDP, GDP growth, income per capita and currency movements for BRICs and the G6. The simulations were performed for the period 2005 to 2050 and were based on Goldman and Sachs forecasts up to 2004.<sup>4</sup> Based on Wilson and Purushothaman (2003) predictions, by 2039 combined BRICs is expected to surpass the present G6 in terms of US\$GDP (Figure 2). Already Wilson *et al.* (2011) reported that 2010 was the “watershed” year for BRICs as their members have continued to overtake other developed countries in the world rankings. Wilson *et al.* (2011) noted that the ascendance of BRICs in the global economy is occurring more rapidly than anticipated.

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<sup>4</sup> See Wilson and Purushothaman (2003) for the various assumptions made about the simulations.

**Figure 2**  
**Projected GDP (US\$ bn) of the BRICs and the G6**



*Source: Wilson and Purushothaman (2003)*

Specifically, in 2010 China was ranked as the world’s second largest economy overtaking Japan while Brazil moved ahead of Spain and Italy into seventh position. India and Russia also made significant strides overtaking Spain to be the ninth and eleventh largest economies in the world, respectively. Additionally, Wilson and Purushothaman (2003) noted that BRICs will replace the present G6 by 2050 with only Japan and the US being among the other non-BRIC members in the six largest economies in the world measured by the same criterion. The upward mobility of BRICs in the global economy is expected to be gradual for the most part with the first 30 years being more robust. Of the four BRIC members China and India are expected to be the two members contributing a significantly large part of the projected GDP of combined BRICs as compared to Russia and Brazil. Wilson and Purushothaman (2003) however, noted that BRIC economies are still expected to remain poorer (although relatively richer in comparison to the start of the period) than the G6 economies on a per capita basis.

The predictions made by Wilson and Purushothaman (2003) have certainly sparked interest in the growth of emerging markets and their potential to reshape the global economy. In this regard, other institutions such as PwC and HSBC also performed similar projections about the likely state of the world economy in 2050. In particular, PwC (2011) suggested a list of seven emerging countries (E7) which they forecast to replace the present G7.

Notably, PwC (2011) in updating their prediction of the global economy post global financial crisis concluded that the global financial crisis has actually fast-tracked the shift in global economic hegemony towards emerging markets. Interestingly, PwC (2011) predicted that by 2020 their E7 (Brazil, Russia, India, China (BRIC) and Indonesia, Mexico and Turkey) could not only surpass the present G7 but China could also move ahead of the US and India could do the same by 2050 (Table 6).

**Table 6**  
**GDP at PPP (Constant 2009 US\$Bn) Rankings**

PPP 2009		PPP 2050		Projected	
Rank	Country	GDP	Rank	Country	GDP
1	US	14256	1	<b>China</b>	<b>59475</b>
<b>2</b>	<b>China</b>	<b>8888</b>	<b>2</b>	<b>India</b>	<b>43180</b>
3	Japan	4138	3	US	37876
<b>4</b>	<b>India</b>	<b>3752</b>	<b>4</b>	<b>Brazil</b>	<b>9762</b>
5	Germany	2984	5	Japan	7664
<b>6</b>	<b>Russia</b>	<b>2687</b>	<b>6</b>	<b>Russia</b>	<b>7559</b>
7	UK	2257	7	Mexico	6682
8	France	2172	8	Indonesia	6205
<b>9</b>	<b>Brazil</b>	<b>2020</b>	9	Germany	5707
10	Italy	1922	10	UK	5628
11	Mexico	1540	11	France	5344
12	Spain	1496	12	Turkey	5298
13	South Korea	1324	13	Nigeria	4530
14	Canada	1280	14	Vietnam	3939
15	Turkey	1040	15	Italy	3798
16	Indonesia	967	16	Canada	3322
17	Australia	858	17	South Korea	3258
18	Saudi Arabia	595	18	Spain	3195
19	Argentina	586	19	Saudi Arabia	3039
20	South Africa	508	20	Argentina	2549

*Source: PwC (2011)*

Consistent with forecasts produced by Wilson and Purushothaman (2003), PwC (2011) also noted that BRICs will continue trailing the G7 on a per capita basis. In particular, Wilson *et al.* (2011) noted that living standards in

BRICs will be significantly lower than those of the G7. It should be noted, however, that BRIC members are expected to experience significant growth on a per capita basis but given their low starting base relative to other developed economies convergence is not likely to be achieved by 2050. Both PwC (2011) and Wilson *et al.* (2011) forecasted that of the BRICs both China and India have the strongest potential to realize significant growth on a GDP per capita basis (Table 7).

**Table 7**  
**Relative GDP Per Capita Levels in PPP Terms (US = 100)**

	2009	2030	2050
US	100	100	100
Japan	71	78	79
Germany	79	80	82
UK	81	83	87
France	76	79	83
Italy	71	74	74
Canada	84	83	83
China	14	33	45
India	7	15	28
Brazil	22	31	41
Russia	42	67	74
Indonesia	9	16	22
Mexico	31	43	54
Turkey	30	43	57

*Source: PwC (2011)*

The projections made by Ward (2011) on the growth of emerging economies are also similar to that made by Wilson and Purushothaman (2003) and PwC (2011). In that, the growth of BRICs and other emerging markets will continue to dominate global economic growth and more importantly their contribution to global economic growth would be as twice as large as compared to their developed counterparts.

In terms of the composition of the top 30 economies by 2050 it is expected to be BRIC heavy as China and India are projected to be among the top 3 while Brazil is at seventh and Russia at position 15 (Table 8). More interestingly, Ward (2011) noted that the projected growth of emerging markets such as China and India is a continuation of the trend observed

in the global economy in the last 40 years.

**Table 8**  
**The Potential Reshuffle between now and 2050**

Order in 1970		Order in 2010		Order in 2050	
1	US	1	US	1	<b>China</b>
2	Japan	2	Japan	2	US
3	Germany	3	<b>China</b>	3	<b>India</b>
4	UK	4	Germany	4	Japan
5	France	5	UK	5	Germany
6	Italy	6	France	6	UK
7	Canada	7	Italy	7	<b>Brazil</b>
8	Spain	8	<b>India</b>	8	Mexico
9	<b>Brazil</b>	9	<b>Brazil</b>	9	France
10	Mexico	10	Canada	10	Canada
11	Netherlands	11	S. Korea	11	Italy
12	Australia	12	Spain	12	Turkey
13	Switzerland	13	Mexico	13	S. Korea
14	Argentina	14	Australia	14	Spain
15	Sweden	15	Netherlands	15	<b>Russia</b>
16	<b>India</b>	16	Argentina	16	Indonesia
17	Belgium	17	<b>Russia</b>	17	Australia
18	<b>China</b>	18	Turkey	18	Argentina
19	Austria	19	Sweden	19	Egypt
20	Denmark	20	Switzerland	20	Malaysia
21	Turkey	21	Indonesia	21	Saudi Arabia
22	South Africa	22	Belgium	22	Thailand
23	Venezuela	23	Saudi Arabia	23	Netherlands
24	S. Korea	24	Poland	24	Poland
25	Greece	25	Hong Kong	25	Iran
26	Norway	26	Austria	26	Colombia
27	Finland	27	Norway	27	Switzerland
28	Saudi Arabia	28	South Africa	28	Hong Kong
29	Iran	29	Thailand	29	Venezuela
30	Portugal	30	Denmark	30	South Africa

*Source: Ward (2011)*

## BRICs and World Trade

In terms of merchandise trade, manufactures appear to be the dominant export category for China and India. China's export of manufactures as a share in its merchandise exports increased from a staggering 84.1% in 1995 to 93.6% in 2010.



**Table 9**  
**Exports by Broad Categories from BRICs**  
**(% of Merchandise Exports)**

	1995	2000	2005	2006	2007	2008	2009	2010
<b>Brazil</b>								
Agriculture	5.20	4.80	3.80	3.70	3.80	3.50	3.80	3.90
Food	28.70	23.40	25.80	25.00	26.30	27.60	34.20	31.10
Fuel	0.90	1.60	6.00	7.70	8.30	9.50	9.00	10.10
	53.50	58.40	53.00	50.80	47.80	44.80	39.50	37.10
	10.30	9.80	9.60	10.80	11.00	12.10	11.70	17.80
<b>Russia</b>								
Agriculture	-	3.10	2.80	2.60	2.90	2.10	2.30	2.10
Food	-	1.20	1.60	1.60	2.30	1.80	3.20	2.00
Fuel	-	50.60	61.80	48.70	61.40	65.70	66.70	64.40
Manufactures	-	23.60	18.80	16.50	17.00	16.70	17.20	14.70
Ores and metals	-	9.30	6.70	8.20	8.30	5.60	5.70	5.60
<b>India</b>								
Agriculture	1.30	1.30	1.30	1.70	2.00	1.70	1.20	2.00
Food	18.70	12.80	9.00	8.60	9.20	9.90	8.00	8.30
Fuel	1.70	3.40	10.30	14.80	15.90	17.70	13.40	16.90
Manufactures	73.50	77.80	71.10	66.30	64.20	62.80	66.80	63.80
Ores and metals	3.30	2.70	7.20	7.70	7.60	6.20	6.20	7.00
<b>China</b>								
Agriculture	1.70	1.10	0.50	0.50	0.50	0.40	0.40	0.50
Food	8.20	5.40	3.20	2.90	2.70	2.50	2.90	2.80
Fuel	3.60	3.10	2.30	1.80	1.70	2.20	1.70	1.70
Manufactures	84.10	88.20	91.90	92.40	93.10	93.00	93.60	93.60
Ores and metals	2.10	1.90	1.90	2.20	1.90	1.70	1.20	1.40

*Source: World Development Indicators (2012)*

India's export of manufactures although marginally declining over the period still represents approximately 64% of India's merchandise exports. Brazil also has a relatively large export of manufactures relative to its other sectors while the major merchandise export category for Russia is fuel which accounts for approximately 64% of its merchandise export by 2010. Moreover, Brazil is the only BRIC member that appears to have a growing proportion of food exports. On the other hand both India and China have experienced a persistent decline in food exports while Russia's share remained relatively low for the last decade (Table 9).

Merchandise trade as a percent of GDP is much more important to China and Russia as compared to Brazil and India although merchandise trade has been slowly growing for the two latter economies. For the period 2006-2010 China's merchandise trade in GDP has averaged over 55% while Russia's averaged just over 44%.

In terms of total merchandise trade, all four BRIC members' recorded considerable increases in export to the world. China and Russia are the two BRIC economies responsible for a large part of BRICs merchandise export to the world for the period 1990 to 2010. Notably, China and India accounted for a large share in BRICs import for the same period with China again playing the major role. Given these trends it is easily argued that China is certainly a driving force in BRICs in the merchandise trade arena. In particular, China also recorded the largest trade surplus among BRICs while India experienced persistent trade deficits for the period 1990-2010 (Table 10).

Moreover, Makin (2006) noted that China's increasing trade surpluses has resulted from various policy initiatives such as China's accession to the World Trade Organization in 2001, significant reductions in tariff barriers from over 55% in 1982 to just over 9% in 2008 as well as proper exchange rate management. Additionally, Hale (2006) suggested that China's trade surplus has also increased on account of FDI from multinationals into export oriented sectors (for example the automotive industries). With respect to India's persistent trade deficit, Palit (2008) argued that India's trade deficit originates largely from industrial imports and rising crude prices.

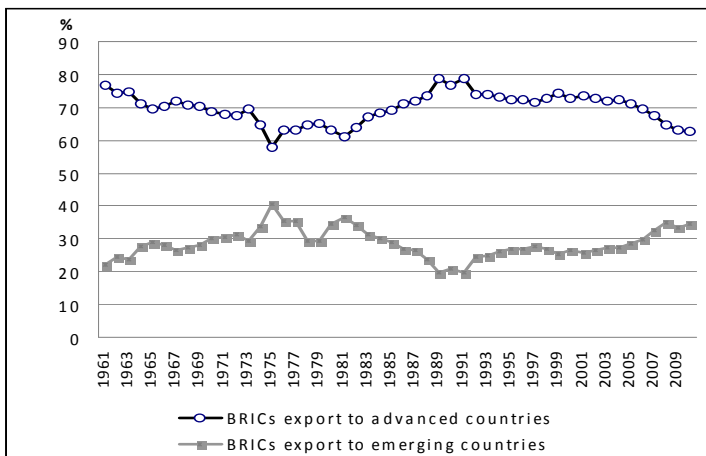
**Table 10**  
**BRICs Merchandise Trade with the World US\$bn.**

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Year	1990	2000	2005	2006	2007	2008	2009	2010
<b>Exports</b>								
Brazil	31.4	55.1	118.5	137.8	160.6	197.9	153.0	197.4
China	-	249.2	762.0	968.9	1220.1	1430.7	1201.6	1577.8
India	17.9	42.4	100.4	121.2	145.9	181.9	176.8	220.4
Russia	-	103.1	241.5	301.2	352.3	468.0	301.8	400.1
<b>Imports</b>								
Brazil	22.5	55.9	73.6	91.3	120.6	173.2	127.6	180.5
China	-	225.1	660.0	791.5	956.1	1132.6	1005.6	1396.0
India	23.8	52.9	140.9	178.2	218.6	315.7	266.4	268.6
Russia	0.0	33.9	98.7	137.8	199.7	267.1	170.8	248.7
<b>Trade Balance</b>								
Brazil	9.0	-0.7	44.9	46.5	40.0	24.7	25.3	16.9
China	-	24.1	102.0	177.5	263.9	298.1	196.1	181.8
India	-5.9	-10.6	-40.5	-57.0	-72.7	-133.9	-89.6	-48.2
Russia	-	69.2	142.7	163.4	152.5	200.9	131.0	151.4

Source: Own calculations from UN Comtrade database (2012)

**Figure 3**  
**Direction of BRICs Export**



Source: International Monetary Fund (2011)

Palit noted that this is not a major concern for a rapidly growing economy such as India and despite rising crude prices the Indian economy is

quite capable of managing the present trade deficit. Another interesting phenomenon of BRICs pattern of trade is its direction of exports. The export of BRICs over the last decade is slowly shifting away from developed economies to other emerging markets (Figure 3).

**Table 11**  
**BRICs Top 5 Trading Partners (2010)**

<b>Top Export Partners</b>	<b>% of Total Exports</b>	<b>Top Import Partners</b>	<b>% of Total Imports</b>
<b>Brazil</b>			
China	15.6	USA	15.1
USA	9.7	China	14.2
Argentina	9.3	Argentina	8.0
Netherlands	5.2	Germany	6.5
Germany	4.1	Rep. of Korea	4.7
<b>Russia</b>			
Netherlands	13.5	China	15.7
Italy	6.8	Germany	10.7
Germany	6.3	Areas, nes	8.0
Ukraine	5.8	Ukraine	5.6
Turkey	5.1	USA	4.5
<b>India</b>			
United Arab Emirates	12.4	China	12.3
		United Arab Emirates	8.8
USA	10.7	Switzerland	6.3
China	7.9	USA	5.8
China, Hong Kong	4.3	Saudi Arabia	5.6
Singapore	4.1		
<b>China</b>			
USA	18.0	Japan	12.7
China, Hong Kong	13.8	Rep. of Korea	9.9
Japan	7.7	Other Asia, nes	8.3
Rep. of Korea	4.4	China, Hong Kong	7.6
Germany	4.3	USA	7.4

*Source:* Own calculations from UN Comtrade database (2011)

Table 11 illustrates this point further by identifying BRICs top five export and import partners as of 2010. It is important to note here that in most cases BRIC members are their own top trading partners. Particularly, Brazil's top export market is China while its second top import market is also China. China also features as Russia's and India's top import sources

as well as India's third most important export market. China's major trading partner although not from BRICs comes from other emerging markets in Asia such as South Korea, Japan and Hong Kong.

Table 12 shows the 10 leading goods exported from BRICs for the time period 2008-2010. Petroleum products and natural gas has the highest share in BRICs merchandise exports for the period although declining marginally from approximately 15% in 2008 to about 12% in 2010. These two sectors can be attributed largely to the Russian economy. Other major export commodity from BRICs includes machinery and other electrical equipment.

**Table 12**  
**Major Exports from BRICs**  
**(% in Total Exports) - 2008-2010**

<b>HS4</b>	<b>Description</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
270900	Petroleum oils	7.4	5.7	6.1
271019	Light petroleum distillates nes	4.5	3.6	4.0
271121	Natural gas in gaseous state	2.9	2.2	1.9
847130	Portable digital computers	2.9	3.6	4.0
851712	Telephones for cellular networks	1.8	2.4	2.1
847330	Parts & acc. of automatic data processing mach.	1.4	1.4	1.3
271011	Aviation spirit	1.2	1.1	1.3
851770	Parts of telephone sets for cellular networks	1.1	1.2	1.3
901380	Optical devices	1.0	1.1	1.1
851762	Machines for the reception, conv. and trans.	0.9	1.0	0.9
<b>TOTAL</b>		<b>25.0</b>	<b>23.4</b>	<b>23.9</b>

*Source: Own calculations from Trade Map (2012)*

## **CARICOM's Trade with BRICs**

BRICs can be described as negligible trading partners to the CARICOM region on the export side as CARICOM's export to BRICs averaged less than 2% for the last decade. In particular, BRICs share in CARICOM's export increased marginally from 1.3% in 2001 to 1.6% in 2010. CARICOM imports more from BRICs on average as BRICs share in CARICOM imports

averaged 7.5% for the period increasing from 4% in 2001 to 7% in 2010 (Table 13).

**Table 13**  
**CARICOM's Export to BRICs,**  
**US\$m 2001-2010**

	<b>BHS</b>	<b>BRD</b>	<b>BLZ</b>	<b>GRD</b>	<b>GUY</b>	<b>JAM</b>	<b>TTO</b>	<b>CARICOM</b>
2001	0.60	0.32	0.11	0.21	3.50	53.02	43.92	106.41
2002	0.40	0.41	-	0.09	2.96	52.37	21.68	82.96
2003	0.50	0.61	0.05	0.03	3.86	115.23	45.54	187.81
2004	0.48	0.76	0.04	0.14	3.41	173.51	55.62	238.57
2005	-	0.94	0.06	0.09	10.75	138.61	78.72	244.45
2006	1.20	2.24	0.31	0.08	23.84	325.73	102.16	494.83
2007	12.76	4.77	0.09	0.09	17.81	147.14	189.44	423.26
2008	4.40	2.27	0.03	0.00	20.46	130.56	253.24	456.28
2009	4.20	5.69	0.39	0.00	17.29	23.21	184.69	288.99
2010	6.51	3.51	1.17	0.00	20.37	40.45	-	702.79
<b>CARICOM's Import from BRICs, US\$m 2001-2010</b>								
2001	12.43	35.87	9.05	3.94	23.38	140.21	287.63	598.25
2002	5.46	45.33	9.29	4.91	28.49	153.10	306.49	662.23
2003	3.30	51.90	8.80	7.23	29.31	180.26	479.41	896.73
2004	2.94	56.30	10.86	9.06	42.55	283.55	679.22	1360.89
2005	14.77	84.62	14.61	19.09	56.03	315.34	985.42	1725.61
2006	3.96	84.40	34.38	24.60	73.10	379.70	1000.00	2307.46
2007	5.50	79.91	50.62	18.86	117.51	561.86	1000.00	2409.43
2008	2.39	91.25	74.64	-	115.06	570.89	2000.00	7560.95
2009	5.02	85.84	67.07	-	95.09	377.75	1000.00	5386.89
2010	4.33	88.18	75.26	-	130.15	472.39	-	5908.07

*Source: Trade Map (2012)*

Notably, all the listed CARICOM countries recorded persistent trade deficits with BRICs in the last decade. Trinidad and Tobago, Jamaica and Guyana are the three CARICOM countries that dominate CARICOM's export performance in relation to BRICs.

Moreover, these three countries are richly endowed with natural resources such as crude oil, natural gas, asphalt, aluminium and other precious metals which are needed to facilitate the growth process in many emerging markets. Exports in these areas from CARICOM to BRICs have great

prospects to expand in the coming decades as BRICs voracity for natural resources increase with their growth. These three countries also account for a large share in CARICOM's import from BRICs with Trinidad and Tobago being the largest importer from BRICs in the last decade.

A closer examination of CARICOM's top ten export commodities to BRICs reveal further evidence of the type of products from CARICOM that have been able to penetrate BRIC markets. Primary among them are natural gas, ammonia, methanol, aluminium, iron and ores and lumber. These products originate mostly from Trinidad and Tobago, Jamaica and Guyana. In particular, CARICOM's top export to BRICs accounts for shares in CARICOM's total export in the same products from 0.8% for ferrous products to approximately 60% for iron and ores (see Table 14).

Moreover, CARICOM's top ten export commodities to BRICs only account for less than one percent of BRICs total imports from the world. On the other hand, CARICOM's export of these products account for just over 40% of CARICOM's total export to the world. This implies that there may be room for growth in trade in other product categories from CARICOM as well as CARICOM would need to identify and develop potential trade complementarities that may exist between the region and BRICs to further improve trade relations.

Furthermore, apart from natural resource based products, CARICOM countries have not been able to capitalize on the growth in BRICs markets.

**Table 14**  
**CARICOM's Top Export to BRICs US\$m - 2010**

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HS4	Description	CARICOM Exports to BRICs	CARICOM Exports to World	% of CARICOM Exports	BRICs Imports from World
271111	Natural gas, liquefied	0.33	4.42	7.50	5.89
281410	Anhydrous ammonia	0.14	2.03	6.60	0.69
290511	Methanol (methyl alc.)	0.04	1.49	2.80	1.88
281820	Aluminium oxide nes	0.04	0.40	9.20	3.03
260112	Iron ores & con.	0.03	0.05	59.90	3.38
721391	Hot rolled bar/rod	0.03	0.11	22.80	0.47
890190	Cargo vessels nes	0.01	0.08	14.00	1.10
260600	Aluminium ores	0.01	0.30	2.60	1.34
720310	Ferrous products	0.01	0.86	0.80	0.46
440729	Lumber, trop. Etc.	0.01	0.03	16.80	0.24
<b>Total</b>		<b>0.70</b>	<b>23.76</b>		<b>2093.79</b>

*Source:* Own calculations from Trade map (2012)

The inference here is that CARICOM's trade with BRICs is highly intensive in primary products and CARICOM countries have not been able to penetrate the BRICs market so far in other higher value added type merchandise products and in this regard there is considerable room for growth in trade between CARICOM and BRICs.

### **Trade Complementarity between CARICOM and BRICs**

From a review of the basic trade statistics between CARICOM and BRICs, it is clear that trade between the two groups is small and mostly concentrated in primary products especially on the export side from a CARICOM perspective.

This low trade can be explained by various factors including the fact that in the past most products originating from CARICOM received duty free access into markets such as Canada, the European Union and the USA via special preferential trade agreements. In fact, the latter two are the region's major trading partners and accounts for approximately 60% of CARICOM's extra-regional trade. This coupled with the fact that CARICOM's export basket is concentrated in a few primary products makes it difficult for the region to penetrate more competitive markets such as China and India.



Improving trade relations between CARICOM and BRICs would depend largely on the level of trade complementarity and comparative advantage among the two groups. In this regard, the rest of this section formally assesses the pattern of trade between CARICOM and BRICs using several popular trade indices such as the trade intensity index (TII), trade complementarity index (TCI), trade bias index (TBI) and the revealed comparative advantage index (RCA).<sup>5</sup>

The trade intensity index, trade complementarity index and trade bias index were calculated for eleven members of CARICOM in relation to individual members of BRICs for 264 Standard International Trade Classification (SITC)-3 digit commodities for the period 1999-2008. The trade intensity index reveals that most CARICOM countries have a low intensity to trade with BRIC members as indicated by values of the TII below unity. The only exception was Jamaica reporting TII just marginally above unity with China and Russia (Table 15).

Decomposing the structure of trade intensity further reveals less favourable results for CARICOM's trade with BRICs and also provides another possible explanation for CARICOM's low trade with BRICs. In particular, most CARICOM countries appear to have a low level of trade complementarity with their BRIC counterparts.

The exceptions in CARICOM were among the major economies such as Barbados, Bahamas, Suriname, Guyana and Jamaica and these results are not surprising given the structure of their economies.

**Table 15**  
**Trade Intensity, Complementarity and Bias between**  
**CARICOM and BRICs (1999-2008)**

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<sup>5</sup> See Appendix for an explanation relating to Indices of Trade Intensity, Trade Complementarity and Trade Bias.

	BRA			RUS		
	TII	TCI	TBI	TII	TCI	TBI
BHS	0.19	1.00	0.20	-	0.98	-
BRB	0.04	1.11	0.05	-	2.01	-
BLZ	0.01	0.46	0.06	-	2.91	-
DMA	0.01	0.91	0.01	-	2.49	-
GRD	0.28	1.23	0.27	-	1.40	-
GUY	0.09	0.49	0.20	0.01	4.37	0.00
JAM	0.07	0.49	0.14	2.29	10.58	0.26
LCA	0.02	0.75	0.03	0.01	2.24	0.00
SUR	0.73	0.41	5.35	0.31	4.41	0.07
TTO	0.92	1.63	0.57	0.05	2.38	0.02
VCT	0.02	1.26	0.01	-	0.55	-
	IND			CHN		
BHS	0.01	0.57	0.01	0.03	1.59	0.02
BRB	0.01	0.79	0.02	0.06	0.62	0.10
BLZ	0.01	0.86	0.01	0.01	0.77	0.01
DMA	0.00	0.75	0.00	0.00	0.48	0.00
GRD	0.02	1.07	0.02	0.02	0.54	0.05
GUY	0.55	4.64	0.14	0.13	0.65	0.20
JAM	0.06	0.57	0.09	1.06	2.18	0.42
LCA	0.08	0.77	0.14	0.03	0.49	0.07
SUR	0.55	0.47	1.20	0.09	0.34	0.39
TTO	0.10	1.98	0.06	0.02	0.88	0.02
VCT	0.02	0.81	0.03	0.00	0.42	0.01

*Source:* Own calculations from UN Comtrade database (2011)

Surprisingly however, CARICOM countries appear to have a stronger level of trade complementarity with Russia despite a low level of trade intensity. Generally countries that reported a high level of trade with BRICs (Table 13) also recorded trade complementarity indices above unity indicating that the present pattern of trade between CARICOM and BRICs is of a complementary nature. It should also be noted that these countries are richly endowed with natural resources and primary products which account for this phenomenon (Table 16).

**Table 16**  
**Trade Complementarity Index by SITC 3 Digit Classification**  
**(average 1999-2008)**

CARICOM	BRICs	Description	SITC Code	TCI value (>1)
BLZ	RUS	Sugar confectionary	061	1.32
DMA	RUS	Fruit and nuts	057	1.08
GUY	RUS	Sugar confectionary	061	2.18
GUY	RUS	Aluminium ores and con.	285	1.69
LCA	RUS	Fruit and nuts	057	1.25
VCT	RUS	Fruit and nuts	057	1.30
SUR	RUS	Aluminum ores and con.	285	2.12
JAM	RUS	Aluminum ores and con.	285	9.59
GUY	IND	Gold	971	3.77
BHS	CHN	Polymers of styrene	572	1.10
JAM	CHN	Aluminum ores and con.	285	1.91

*Source: Own computations from UN Comtrade database (2011)*

This is consistent with the evidence presented by the IMF (2011) where it was found that exports from Lower Income Countries (LICs) to BRICs are characterized by a high level of trade complementarity. IMF (2011) further noted that this trend may be due to BRICs pattern of FDI inflow and other forms of development assistance. These results infer that further trade can be nurtured between CARICOM and BRICs through direct policy intervention. Moreover, present trade complementarity originates largely from primary products which are almost guaranteed a market in many emerging economies as their need for primary resources could only increase with growth. The challenge that remains for CARICOM is to build stronger trade complementarity with BRICs in areas other than primary goods.

### **CARICOM's Revealed Comparative Advantage in Merchandise Trade**

Further analysis into CARICOM's pattern of export to BRICs through a revealed comparative advantage (RCA) index reveals some more interesting results. The RCA index used here examines CARICOM's export performance to BRICs in relation to the world's export performance to BRICs for commodities defined at the Harmonized System (HS) 4 digit level. Tables 17a and 17b provide the results for those commodities that reveal comparative advantage over the period 2006-2010. CARICOM

has RCA in 59 commodities at the HS 4 digit level for the period 2006-2010.

**Table 17a**  
**CARICOM's RCA in Relation to BRICs for Goods**  
**(Average for 2006-2010): Strong RCA**

<b>HS 4 Digit</b>	<b>Description</b>	<b>06-10</b>	<b>Category</b>
4404	Hoop wood; split poles; piles, etc.	1661.6	Strong
2714	Bitumen & asphalt, natural	968.0	Strong
2814	Ammonia	633.8	Strong
2818	Aluminium oxide	282.7	Strong
7213	Bars & rods	98.4	Strong
2617	Ores and concentrates	79.8	Strong
2711	Petroleum gases	45.0	Strong
2606	Aluminium ores and concentrates	32.2	Strong
0814	Citrus fruit and melon peel	30.5	Strong
0106	Live animals, nes	25.0	Strong
7227	Bars & rods, hot-rolled	24.0	Strong
4407	Wood sawn	20.7	Strong
7207	Semi-finished products of iron	17.6	Strong
7204	Ferrous waste and scrap.	15.4	Strong
7203	Ferrous prod. of iron ore	9.4	Strong
4409	Wood shaped along any edges	9.1	Strong
3301	Essential oils etc.	8.0	Strong
8101	Tungsten and articles thereof.	7.6	Strong
2523	Cements, aluminous etc.	6.1	Strong
2905	Acyclic alcohols and their der.	5.8	Strong
8107	Cadmium and articles thereof.	5.8	Strong
7111	Base metals, silver or gold.	5.4	Strong
3303	Perfumes and toilet waters	5.1	Strong
9704	Used postage/revenue stamps	4.8	Strong
0904	Pepper, peppers and capsicum	4.6	Strong
4403	Wood in the rough	4.6	Strong

*Source:* Own calculations from Trade map (2012)

**Table 17b**

**CARICOM's RCA in Relation to BRICs for Goods  
(Average for 2006-2010): Medium and Weak RCA**

HS 4 Digit	Description	06-10	Category
6310	Rags, scrap twine,28 ordage, rope	3.9	Medium
7326	Articles of iron or steel nes	3.7	Medium
4402	Wood charcoal	3.2	Medium
1006	Rice	3.1	Medium
8901	Cruise ship, cargo ship, barges	3.1	Medium
7602	Aluminium waste and scrap	2.9	Weak
3102	Mineral or chemical fertilizers	2.8	Weak
9015	Surveying, hydrographic etc.	2.8	Weak
2911	Acetals & hemiacetals	2.6	Weak
2942	Organic compounds, nes	2.2	Weak
6405	Footwear, nes	2.1	Weak
1101	Wheat or meslin flour	2.1	Weak
3307	Personal toilet preparations, etc.	1.9	Weak
9208	Musical box, nes.	1.9	Weak
0909	Seeds of anise etc.	1.7	Weak
9021	Orthopaedic appliance	1.7	Weak
0707	Cucumbers and gherkins.	1.6	Weak
6207	Men's briefs, bathrobes etc.	1.6	Weak
7312	Iron & steel strand etc.	1.5	Weak
2208	Spirits, liqueurs etc.	1.4	Weak
5608	Knotted nettg of twine	1.4	Weak
5310	Woven fabrics of jute	1.4	Weak
7503	Nickel waste and scrap	1.3	Weak
7802	Lead waste and scrap	1.3	Weak
0712	Dried vegetables	1.3	Weak
3911	Petroleum, polyterpenes etc.	1.3	Weak
6309	Worn clothing and articles	1.3	Weak
8431	Machinery part (hd 84.25 to 84.30)	1.3	Weak
2827	Chlorides, bromides etc.	1.2	Weak
9028	Gas/ liquid/ electricity supply etc.	1.1	Weak
7214	Bars & rods of iron	1.1	Weak
0508	Coral and similar materials	1.1	Weak

*Source:* Own calculations from Trade map (2012)

Furthermore, 44% of these commodities exhibited strong comparative advantage, 10% revealed medium comparative advantage and 46% revealed weak comparative advantage with BRICs. Of greater interest is the fact that most of the comparative advantage is concentrated in food

products, mineral products, chemicals and metals which together account for approximately 60% of commodities with comparative advantage.

These results highlight a deeper structural challenge for CARICOM countries as they have not been able to develop stronger competitiveness in non-resource based products with BRICs. In this regard, CARICOM countries would need to be wary of being locked into a production structure that is biased towards the lower end of the value chain which can then stifle the regions' room for long term growth and diversification.

Further examining the evolution of comparative advantage for CARICOM's export performance to BRICs using a transition probability matrix reveals that commodities that are in the comparative disadvantage group (class a) has a high probability of remaining in that class overtime (0.98).<sup>6</sup>

Similarly, those commodities reporting strong comparative advantage (class d) also has a high probability of remaining in that class. However, the upper triangular matrix is weaker than the lower triangular matrix which indicates that the probability of commodities moving from a lower class of comparative advantage to a stronger class is low.

**Table 18**  
**Transition Probability Matrix for**

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<sup>6</sup> The transition probability matrix provides some empirical insights into the dynamic nature of comparative advantage from time t to time t+1. It determines the probability of moving between different classes of comparative advantage. Hinloopen and van Marrewijk (2001) decomposed the interpretation of RCA index in four categories (class a, b, c, and d). The first class (class a) refers to commodities with a comparative disadvantage ( $0 < RCA < 1$ ), class b refers to commodities with weak comparative advantage ( $1 < RCA < 2$ ), class c refers to commodities with medium comparative advantage ( $2 < RCA < 4$ ) and class d refers to commodities with strong comparative advantage ( $4 < RCA$ ).

**CARICOM Export to BRICs  
(2006-2010)**

		<u>To</u>			
		a	b	c	d
<u>From</u>	a	0.98	0.01	0.00	0.01
	b	0.57	0.29	0.00	0.14
	c	0.80	0.00	0.00	0.20
	d	0.21	0.07	0.00	0.71

*Source: Own calculations from Table 17*

### **CARICOM and BRICs Trade in Services**

Trade in services for most CARICOM countries contribute to a large part of their GDP. In fact, trade in services account for an average of over 35% of GDP for 10 CARICOM countries during the last decade and averaged over 64% for another two member states for the same period (Table 19).

However, with the exception of Haiti the share of services trade in GDP for all CARICOM members states declined during the last decade with some more drastic than others. In percentage terms, the share in GDP of trade in services for BRIC members is significantly lower than their CARICOM counterparts. Notably, only China and India experienced growth in services contribution to GDP with the latter's contribution increasing by approximately 44% from 2001 to 2010. The importance of the services sector to the Indian economy is not trivial and is usually equated with what merchandise trade is to China.

**Table 19**  
**Trade in Services as (% GDP)**

	2001	2005	2006	2007	2008	2009	2010
ATG	71.8	67.4	63.3	61.4	60.7	60.0	60.5
BHS	49.1	58.3	58.9	57.8	53.9	48.9	47.6
BRB	58.5	70.2	71.9	69.4	69.7	61.6	57.7
BLZ	32.9	41.3	42.5	44.3	40.9	37.5	36.8
DMA	37.7	37.1	38.6	40.7	40.6	39.0	38.8
GRD	41.8	30.4	33.6	33.8	31.6	31.3	30.9
GUY	52.3	42.3	27.0	25.6	27.8	21.9	26.6
HTI	11.4	16.5	16.1	15.7	17.1	17.7	22.5
JAM	37.5	36.3	38.9	38.7	36.2	36.0	31.3
LCA	59.2	69.6	53.7	52.8	51.3	49.1	49.2
VCT	44.2	42.9	42.4	40.2	36.3	33.3	32.5
SUR	30.6	31.0	23.5	23.2	22.3	17.6	-
TTO	10.7	9.0	6.4	6.0	4.7	5.8	-
BRA	4.8	4.6	4.5	4.5	4.7	4.7	4.5
RUS	10.4	8.3	7.7	7.5	7.6	8.4	8.1
IND	7.8	12.0	13.5	12.7	16.1	12.6	13.9
CHN	5.5	7.0	7.1	7.2	6.8	5.8	6.2

*Source: World Development Indicators (2012)*

Moreover, the services export from CARICOM and BRICs to the world vary significantly in composition and size. BRICs export of services is strongly concentrated in other business services, travel, personal remittances, transportation and computer and information services.

On the other hand, CARICOM's export of services is mostly concentrated in personal remittances and travel. CARICOM's export services to the world increased by 18% over the last decade while BRICs services export increased by a staggering 434%. More interestingly is BRICs export of travel services is about 7 times larger than CARICOM's while personal remittances is roughly 13 times more than that of CARICOM. Therefore, while a large part of CARICOM's GDP originates from service exports, it is nowhere close in comparison to the volume of BRICs service exports (Table 20). The next section formally assesses the competitiveness of CARICOM and BRICs in service exports to the world.



**Table 20**  
**Composition of BRICs Trade in Services as Compared to**  
**CARICOM's Trade in Services (US\$bn)**

<b>CARICOM's Export of Services to World</b>						
<b>Code</b>	<b>Service Label</b>	<b>2000</b>	<b>2005</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
205	Transportation	0.8	1.0	1.0	0.7	0.6
236	Travel	5.2	6.4	7.5	6.6	3.2
245	Communications ser.	0.5	0.3	0.3	0.3	0.0
249	Construction ser.	0.0	0.0	0.0	0.0	-
253	Insurance ser.	0.2	0.3	0.4	0.1	-
260	Financial ser.	0.0	0.1	0.1	0.1	-
262	Computer and info.	0.1	0.1	0.0	0.1	-
266	Royalties and license	0.0	0.1	0.1	0.0	-
268	Other business ser.	0.5	0.8	1.0	0.7	-
287	Personal and cultural	0.0	0.0	0.0	0.0	-
291	Government ser.	0.2	0.2	0.3	0.2	-
REM	Personal remittances	1.8	3.4	4.3	3.6	-
200	Total services	7.4	9.3	10.6	8.9	8.7
<b>BRICs export of services to World</b>						
205	Transportation	10.6	33.4	70.4	50.9	18.0
236	Travel	24.9	46.5	70.3	65.4	20.0
245	Communications ser.	2.4	3.0	6.0	4.3	-
249	Construction ser.	1.5	5.2	15.7	13.6	-
253	Insurance services	0.7	2.0	4.4	3.9	-
260	Financial ser.	0.8	2.2	6.9	6.4	-
262	Computer and info.	5.2	24.3	57.1	54.7	-
266	Royalties and license	0.4	0.7	1.6	1.6	-
268	Other business ser.	18.1	48.1	95.6	84.2	-
287	Personal and cultural	0.1	0.5	1.6	1.0	-
291	Government ser.	1.5	2.3	3.3	3.3	-
REM	Personal remittances	15.5	36.2	80.9	79.4	-
200	Total services	66.2	168.0	332.9	289.4	353.7

*Source: Trade Map (2012)*

## **CARICOM's Revealed Comparative Advantage in Services Trade**

On average, both CARICOM and BRICs reveal comparative advantage in the same number of service groups for period 2000-2010. CARICOM observed comparative advantage in travel, communications, insurance and personal remittances for the period. However, the region lost comparative advantage in the insurance industry after 2008 and experienced a

movement from medium comparative advantage to weak comparative advantage over the period for communication services. Both personal remittances and travel export from CARICOM recorded improvements in their competitiveness with world exports over the last decade.

On the other hand, BRICs started the last decade with comparative advantage in 50% of the services sectors as classified by the United Nations. By 2004 BRICs lost comparative advantage in communication services and in travel services by 2007.

BRICs maintained comparative advantage in the other four sectors namely construction, computer and information, other business services and personal remittances. From these results CARICOM appears to be more competitive than BRICs in terms of travel and communication services in relation to world exports.

This implies that the region can build on these areas as well as develop areas such as financial services and strengthen its insurance industry as well as the travel and tourism industry to benefit from the potential middle class that is burgeoning in BRICs. In this regard the next section is devoted to exploring the travel and tourism sector in some detail.

## **BRICs Outbound Tourism and Opportunities for CARICOM**

The middle class in BRICs is expected to increase dramatically in the coming decades. This means that there will be a large pool of potential tourist outflows specifically from BRICs and other emerging markets as travel and other leisure activities become more affordable. More importantly is that according to Keohane (2011) the average BRIC tourist spends double the amount as compared to an average non-BRIC tourist.

**Table 21**  
**CARICOM's vs. BRICs RCA in Services Trade**

<b>CARICOM's RCA in Services in Relation to the World</b>											
<b>Code</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
205	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4
236	2.3	2.4	2.4	2.5	2.4	2.6	2.8	2.9	2.9	3.0	1.9
245	2.9	2.3	2.2	1.8	2.0	1.5	1.3	1.3	1.2	1.2	1.7
249	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-
253	1.3	1.6	1.2	1.1	1.4	1.8	1.4	1.4	1.5	0.5	0.3
260	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	-
262	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	-
266	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
268	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.1
287	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.4	0.4	-
291	0.9	0.9	0.9	0.8	0.8	1.0	0.9	1.1	1.3	1.3	0.7
REM	3.3	3.7	3.8	4.0	4.4	4.0	4.0	4.3	4.1	4.0	-
<b>BRICs RCA in services in relation to the world</b>											
205	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4
236	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.9	0.3
245	1.7	1.3	1.1	1.2	0.8	0.8	0.7	0.8	0.8	0.6	-
249	1.2	1.2	1.4	1.4	1.4	1.6	1.4	1.7	1.7	1.7	-
253	0.6	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.6	0.6	-
260	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.3	0.3	-
262	2.7	3.3	3.2	3.4	3.2	3.4	3.3	3.3	3.3	3.2	-
266	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
268	1.2	1.0	1.0	1.1	1.2	1.2	1.2	1.2	1.2	1.2	-
287	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.3	-
291	0.9	1.0	0.8	0.6	0.5	0.5	0.5	0.4	0.5	0.5	-
REM	3.2	3.1	3.0	3.4	2.8	2.4	2.2	2.4	2.5	2.7	-

*Source: Own calculations from Trade Map (2012)*

Thus, the expansion of outbound tourism from BRICs would certainly foster greater growth in the world tourism industry. The number of outbound tourists from BRICs has greatly increased in the last decade. China's outbound tourist alone increased from 3 million in 1992 to 57.4 million in 2010 and is projected to rise significantly with approximately 25 million first-time travellers per year in the next decade (Min-Hua, 2011). India's outbound travel also expanded from approximately 2 million in

1991 to 13.2 million in 2010 and is expected to increase to 50 million by 2020 according to the World Tourism Organization. In 2010, Brazil's outbound travellers reached 6.2 million while Russia accounted for 35.5 million in 2008 (Table 22). In fact, Tourism Intelligence International (2011) noted that the average annual growth of outbound travel from China and India is 13% while Kirichenko (2011) noted that Russia is expected to be the 3<sup>rd</sup> largest outbound market in Europe by 2015. Euromonitor International (2011) also projected that by 2015 outbound travellers from Brazil, Russia, India and China will exceed 6 million, 54 million, 22 million and 62 million, respectively. The Tourism Intelligence International (2011:3) also emphasized that the new pool of tourists originating from emerging markets are wealthy, young, educated, internet savvy and differ greatly with tourists from traditional markets, in that:

*Traditional Western markets have travelled in search of warm weather. They lusted after the sun, sand and sea. Emerging markets have a different take on travel. They are looking for other "S"s. They want shopping, sightseeing and opportunities to gain status/social recognition.*

Furthermore, the BRIC tourist is also known for their spending power. In fact, the World Tourism Organization (UNWTO) in 2010 reported that China and Russia is ranked among the world's top ten spenders on international travel. Specifically, in 2010 China became the third largest spender on international travel after the USA and Germany with an estimated expenditure of US\$54.9bn while Russia came in 9<sup>th</sup> with US\$26.5bn. Moreover, China's outbound tourism expenditure increased from a paltry US\$0.47bn in 1990 to a staggering US\$55bn in 2010 (Table 22). This is expected to increase with China's growth and is projected to reach to US\$77bn as early as 2015 (Euromonitor International, 2011). Russia's outbound tourism expenditure is also significant and increased from US\$11bn in 1995 to US\$26.5bn in 2010. India's outbound spending is not trivial either and increased from US\$0.39bn in 1990 to US\$10.63bn in 2010 and is expected to reach US\$28bn by 2020 according to the Kuoni Travel Report India.<sup>7</sup> Brazil's expenditure on international travel in 2010 was US\$16.4bn which is a significant increase from its expenditure in 1990 which was at US\$1.58bn. Thus, wooing the BRIC tourist can definitely boost the tourism industry in the CARICOM region. At present however, it

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<sup>7</sup> <http://ehotelier.com/hospitality-news/item.php>

should be noted that the region's inbound tourism flows originate largely from North America and Europe.

**Table 22**  
**International Tourism, Expenditures**  
**for Travel Items (current US\$bn)**

	BRA	RUS	IND	CHN	DEU	GBR	USA	CAN
1995	3.39	11.6	1.00	3.69	60.26	24.93	46.26	10.26
2000	3.89	8.85	2.69	13.11	52.82	38.26	67.04	12.44
2001	3.2	9.29	3.01	13.91	51.92	37.93	62.82	11.96
2002	2.4	10.92	2.99	15.4	53.01	41.74	61.74	11.72
2003	2.26	12.88	3.59	15.19	65.23	47.85	60.94	13.34
2004	2.87	15.29	4.82	19.15	71.19	56.44	69.63	15.52
2005	4.72	17.31	6.19	21.76	74.19	59.53	73.32	18.02
2006	5.76	18.11	6.85	24.32	74.12	63.32	77.53	20.54
2007	8.21	21.22	8.22	29.79	83.16	71.52	82.12	24.72
2008	10.96	23.78	9.61	36.16	91.6	69.79	86.08	27.21
2009	10.9	20.77	9.31	43.7	81.4	50.56	80.1	24.17
2010	16.42	26.52	10.63	54.88	77.15	48.52	82.05	29.48
%change	321.73	199.68	295.09	318.48	46.05	26.82	22.38	136.99
<b>International tourism, number of departures (millions)</b>								
	BRA	RUS	IND	CHN	DEU	GBR	USA	CAN
1995	2.60	21.33	3.06	4.52	-	41.35	51.29	18.21
2000	3.23	18.37	4.42	10.47	74.40	56.84	61.33	19.18
2001	2.67	18.03	4.56	12.13	76.40	58.28	59.44	18.36
2002	2.34	20.43	4.94	16.60	73.30	59.38	58.07	17.71
2003	3.23	20.57	5.35	20.22	74.60	61.42	56.25	17.74
2004	2.97	24.51	6.21	28.85	72.30	64.19	61.81	19.60
2005	3.47	28.42	7.19	31.03	77.40	66.49	63.50	21.10
2006	3.93	29.11	8.34	34.52	71.20	69.54	63.66	22.73
2007	4.68	34.29	9.78	40.95	70.40	69.45	64.03	25.16
2008	5.18	36.54	10.87	45.84	73.00	69.01	63.56	27.04
2009	4.95	-	11.07	47.66	72.30	58.61	61.42	-
2010	5.50	35.51	12.50	57.39	-	-	-	-
% change	70.28	93.30	182.81	448.14	-2.82	3.11	0.15	40.98

Source: World Development Indicators (2012) and own derivations

In fact, data from Caribbean Tourism Organization (2012) indicates that the USA is a major source market for many Caribbean countries accounting for approximately 80% of tourist arrivals in the Bahamas, 69% in Haiti, 64% in

Jamaica, 60% in Belize, 59% in St. Kitts and Nevis and 54% in Guyana for 2009. The other major source market is Europe which accounts for upwards of 40% for arrivals in Barbados and Antigua and Barbuda and 31% for Grenada and St. Lucia, respectively.

The Caribbean market represents the third largest source market for CARICOM followed by Canada. However it should be noted that most of CARICOM's traditional source markets such as Europe are "saturated" and growth in outbound travellers and tourism spending is expected to be slow at best in the coming decades (Tourism Intelligence International, 2011; Table 22).

For this reason, policymakers in CARICOM would need to redesign the Caribbean tourism product to attract the vast pool of potential tourists from emerging markets. Table 23 provides some of the reasons that motivate tourists travelling from emerging markets. These characteristics of the emerging market traveller should certainly be incorporated into a CARICOM-BRIC tourism strategy to entice the BRIC tourist and promote and distinguish the region from other tourism destinations. It cannot be underscored enough the importance of wooing the BRIC tourist to the region. Already destinations such as Europe and Australia have recognized the importance of this new exploding market and strong competition from other prime tourism destinations for the BRIC tourist is readily forthcoming.

The region certainly has the potential to compete for the BRIC tourist as it is richly endowed with natural aesthetic beauty and provides rich cultural experiences. For this reason, the region can stand to benefit enormously from travel arrivals from emerging markets. Attracting tourist arrivals from China and India are not difficult as Bernal (2010) noted that approximately 50,000 Japanese tourists visit the region annually.

**Table 23**  
**Differences between Tourists from**  
**Emerging Markets and Traditional Markets**

<b>Emerging Markets</b>	<b>Traditional Markets</b>
Rapid economic growth	Slow economic growth
Emerging middle class	Wide and even distribution of income
Young and Happening	Old and Aging
Low and rising income levels	High but slowing income levels
Inexperienced and curious	Experienced and sophisticated
Highly educated with a lust for experiencing new cultures	Highly educated with a lust for the exotic
From shorter to longer trips	From longer to shorter trips
Growing online travel market	Well-established online travel market
Shopping, sightseeing and status-seeking	Sun, sand and sea
Travelling from East to West	Travelling from North to South
To experience a destination	To visit a destination

*Source: Tourism Intelligence International (2011)*

Furthermore, Chinese visitor arrivals into Trinidad and Tobago also increased from 278 in 2002 to 1,747 up to the last quarter in 2009 (Central Statistical Office of Trinidad and Tobago, 2010).<sup>8</sup>

## **BRICs FDI and Development Assistance in CARICOM**

FDI is often regarded as an essential source of efficient resource allocation and global productivity as transnational firms are able to obtain access into relatively efficient factor markets (Rao, 2008). Inward FDI in particular also facilitates the process of transferring knowledge and technical skills to the

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<sup>8</sup> As recent as January 2012 a delegation from India arrived in Trinidad and Tobago to survey their tourism product and indicated that there is a lot of attraction for the Indian tourists in terms of sport tourism (cricket) and cultural activities. In particular, Trinidad and Tobago is home to batting maestro and triple world record holder Brian Lara and several other top international players that frequent the Indian Pro League cricket tournament in India. This can further boost sport tourism in the region.

host country. BRICs, especially China, have benefitted enormously from inward FDI. China's inward FDI peaked at US\$108bn in 2008 and increased from 2.8% in 1991 to just over 8.5% of world inward FDI flows in 2010. This is not trivial and according to Wei (1995) other developing countries view this trend as a threat in terms of diverting FDI away from their markets. Other BRIC members have also increased their share in world inward FDI especially in the last decade although not as substantial as China. In particular, Brazil's share in world inward FDI increased from 0.7% to almost 4%, Russia's share increased from 0.7% to 3.3% and India's increased from 0.04% to 3% for the same period (Table 24).

**Table 24**  
**FDI Inflows to BRICs, US\$m 1991-2010**

		% in		% in		% in		% in	
	<b>Brazil</b>	<b>World</b>	<b>Russia</b>	<b>World</b>	<b>India</b>	<b>World</b>	<b>China</b>	<b>World</b>	<b>World</b>
1991	1102.2	0.70	-	-	75.0	0.00	4366.3	2.80	
1995	4405.1	1.30	2065.7	0.60	2151.0	0.60	37520.5	11.00	
2000	32779.2	2.30	2714.2	0.20	3588.0	0.30	40714.8	2.90	
2005	15066.3	1.50	12885.8	1.30	7621.8	0.80	72406.0	7.40	
2006	18822.2	1.30	29701.4	2.00	20327.8	1.40	72715.0	5.00	
2007	34584.9	1.80	55073.2	2.80	25349.9	1.30	83521.0	4.20	
2008	45058.2	2.60	75002.4	4.30	42545.7	2.40	108312.0	6.20	
2009	25948.6	2.20	36499.7	3.10	35648.8	3.00	95000.0	8.00	
2010	48438.0	3.90	41194.4	3.30	24639.9	2.00	105735.0	8.50	

		% in		% in		% in		% in	
	<b>Brazil</b>	<b>World</b>	<b>Russia</b>	<b>World</b>	<b>India</b>	<b>World</b>	<b>China</b>	<b>World</b>	<b>World</b>
1991	1015	0.51	-	0.00	-11	-0.01	913	0.46	
1995	1096	0.30	606	0.17	119	0.03	2000	0.55	
2000	2282	0.19	3177	0.26	514	0.04	916	0.07	
2005	2517	0.29	12767	1.45	2985	0.34	12261	1.39	
2006	28202	2.01	23151	1.65	14285	1.02	21160	1.51	
2007	7067	0.32	45916	2.11	17234	0.79	22469	1.03	
2008	20457	1.07	55594	2.91	19397	1.02	52150	2.73	
2009	-10084	-0.86	43665	3.73	15929	1.36	56530	4.83	
2010	11519	0.87	51697	3.91	14626	1.11	68000	5.14	

*Source:* Own calculations from the United Nations Conference on Trade and Development (UNCTAD, 2012)

Duan (2010) noted that developed institutions, resources (both natural and otherwise) and a good business environment are three principal



reasons for the increase of inward FDI into BRICs.

Emerging markets has also been featuring more increasingly in outward FDI flows for a number of reasons such as to secure natural resources and boost their competitiveness in the global economy. Of greater interest is that three of the four BRICs are among the top 15 emerging economies ranked in terms of highest FDI outflows. Russia is ranked fourth followed by China in fifth place while India and Brazil are ranked thirteenth and twenty-fourth respectively (Sauvant, 2005). In particular, BRICs FDI outflows increased considerably from US\$1.9bn in 1991 to over US\$145.8bn in 2010 (Table 25).

**Table 25**  
**Basic Indicators for BRICs Outward FDI**

	1991	1995	2000	2005	2010
<b>Outward FDI Stock US\$bn</b>					
Brazil	42059	44 474	51 946	79 259	180 949
Russia	-	3 346	20 141	146 679	433 655
India	113	495	1 733	9 741	92 407
China	5368	17,768	27 768	57 206	297 600
<b>Outward FDI Stock as a percentage of world outward FDI stock</b>					
Brazil	1.8	1.2	0.7	0.6	0.9
Russia	-	0.1	0.3	1.2	2.1
India	0.0	0.0	0.0	0.1	0.5
China	0.2	0.5	0.3	0.5	1.5
<b>FDI outflows as a percentage of gross fixed capital formation</b>					
Brazil	1.7	0.8	2.1	1.8	3.1
Russia	-	0.7	7.3	9.4	17.1
India	-0.0	0.1	0.5	1.1	2.7
China	0.80	0.80	0.22	1.30	2.61
<b>Outward FDI Stock as a percentage of GDP</b>					
Brazil	11.2	5.8	8.1	9.0	8.8
Russia	-	0.8	7.8	19.2	29.4
India	0.0	0.1	0.4	1.2	5.6
China	1.3	2.3	2.3	2.5	5.1

Source: UNCTAD (2012)

This represents an increase in BRICs share in world FDI outflows from less than 1% in 1991 to over 11% in 2010 with China and Russia contributing to 5.1% and 3.9%, respectively. The outward stock of FDI for combined BRICs

is also significant and increased from US\$47.5bn in 1991 to US\$1,004.6bn in 2010 with Russia commanding the largest share followed by China. During the same period outward FDI stock as a percentage of GDP declined for Brazil from 11.2% to 8.8%, but increased for the other members. Specifically, Russia experienced the largest increase from 0.5% in 1993 to 29.4% in 2010, while India's moved from 0.04% to 5.6% and 1.3% to 5.1% for China during 1991 to 2010. On the other hand, FDI outflows as a percentage of gross fixed capital formation from BRICs are steadily increasing especially for Russia. This indicates that BRICs investments in foreign countries are increasing as in the case of Russia, relative to that of developed economies which stands at 13%. Russia's outward FDI as a percentage of GDP is also the largest of the BRICs accounting for 29% in 2010.

Outward FDI from BRICs into the CARICOM sphere originate largely from China and to a lesser extent India. According to Fieser (2011) China's outward FDI into the region has increased by approximately 300% in the last five years from US\$1.7bn in 2004 to US\$7bn in 2009. Some commentators such as Bernal (2010) have suggested that China's increasing role in the Caribbean is largely diplomatic in nature to ensure that members in the region support or continue to support its 'One China' policy. In fact, Dominica and Grenada severed long-standing diplomatic ties with Taiwan in 2004 and 2005, respectively and signed onto the "One China" policy to recognize the People's Republic of China. Subsequent to this, China has invested significantly in various infrastructural projects in these countries amounting to US\$100mn in Dominica and US\$55mn in Grenada (Table 26).

Apart from this, China's interest in the CARICOM region also stems from the availability of raw materials in several CARICOM countries. Trinidad and Tobago is richly endowed with energy based products such as crude oil, natural gas, asphalt and other downstream energy products; Guyana has minerals, lumber, and bauxite while Jamaica has bauxite. China's demand for these products has increased significantly with its growth over the years and CARICOM countries have potential in supplying China with these resources. In fact, China has already purchased part of a bauxite mining company in Guyana and the Chinese Investment Corporation (CIC) is also set to purchase 10% of the Atlantic Liquefied Natural Gas Company of Trinidad and Tobago which is a major producer of liquefied natural gas

(Watkins, 2011). Sanders (2008) also noted that China has approximately US\$1.4 trillion in foreign reserves to spend and the Chinese government proposes to offer Chinese based firms over US\$530mn in loans to invest in the Caribbean region over the period 2007-2010.

**Table 26**  
**Snapshot of Proposed and or Completed Investments and Projects from China in CARICOM**

Destination	Description	Estimated Value
DMA	Infrastructural Development	US\$100mn
GRD	Cricket Stadium	US\$55mn
BHS	Baha Mar Resort	US\$2.4bn
SUR	Deep sea-harbour	US\$600mn
DOM	Cash infusion into a stalled beach front resort	US\$462mn
BHS	Construction and operation of a container port	US\$1bn
DMA	Cricket stadium	US\$17mn
DMA	Economic assistance	US\$122mn
GUY	Part purchase of Omani Bauxite Mining	US\$100mn
TTO	North Academy of the Performing Arts	TT\$480mn
TTO	Prime Minister's Residence	TT\$243.9mn
TTO	Brian Lara Stadium	TT\$685.1mn
TTO	South Academy of the Performing Arts	TT\$189mn
JAM	Infrastructural Development	US\$500mn

*Sources: Sanders (2011) and Fieser (2011)*

India also has investments in CARICOM in several areas although not as substantial as China. In particular, Fanai *et al.* (2011) noted that India's total investments (approved by joint ventures and wholly owned subsidiaries) in CARICOM totalled to US\$4mn over the period 1996 to 2007. It should be noted that Trinidad and Tobago received US\$2.7mn or 67.5% of India's outward investment in the CARICOM region and Viswanathan (2007) noted that Trinidad and Tobago is the largest recipient of Indian investments in Latin America and the Caribbean. Other countries benefiting from India's outward FDI are The Bahamas (US\$0.8mn), Belize (US\$0.4mn) and Saint Vincent and the Grenadines (US\$0.1mn), (Fanai *et al.*, 2011). India's presence in CARICOM is mostly found in the banking and insurance industries with banks and insurance companies located in The

Bahamas, Trinidad and Tobago and Guyana. Additionally, India also has investments in mining and tourism sectors in the region. In fact, Horta (2008) noted that Indian firms have made significant investments in the steel processing industry in CARICOM by investing approximately US\$3.2bn in steel plants namely Mittal Steel (\$US2bn) and Essar Steel (US\$1.2bn) and also operates four hotels in the region. Additionally, a major Indian based company (Reliance) also has plans to establish an ammonia plant in Trinidad at an estimated value of US\$1bn (Majundar, 2012).

Both China and India uses economic assistance to gain further influence the Caribbean region. These economic assistance programs usually take the form of soft loans, aid, grants, technical support and lines of credit in strategic areas and infrastructural development projects. For example, the Indian government provided a credit line for Suriname and Guyana to the tune of US\$72mn and US\$25.2mn to undertake developmental projects and to modernize Guyana's sugar industry, respectively. In addition, Suriname obtained financial assistance from India to develop a cashew-processing plant. China also provided economic assistance to Dominica worth US\$122mn and embarked on infrastructural development projects in Dominica and Jamaica as well (see Table 26 for a sample of recent projects carried out by China in some CARICOM countries). Although outward FDI and financial assistance from Brazil and Russia to CARICOM are not as substantial as those from China and India they still represent important sources of investment in the future as they spread their tentacles throughout the developing world in search of new markets and resources. Presently, Brazil has engaged Jamaica and St. Kitts in ethanol production through the processing of sugar-cane and is very much interested in Trinidad and Tobago's energy sector (Glasgow, 2011). These trends in FDI outflows from BRICs represent the type of benefits that are available for CARICOM countries. More importantly is that CARICOM's natural resources may become the subject of strong competition from Brazil, India and China in the near future.

## **Conclusion: Challenges Confronting Policymakers in CARICOM**

This paper examined the rise of four emerging markets (BRICs) to obtain a better understanding of their growth dynamics and the possible

implications they may have on the global economy and on CARICOM in particular. Of the four BRICs, China and India are expected to dominate this impact in the coming decades with the dragon outpacing the tiger in their race to the top. The growing competitive strength of emerging markets can lead to dynamic changes in the comparative advantage structure of the global economy as other emerging markets such as the N-11 is likely to attract important investments and production activities through their low unit cost of production and ever increasing production capabilities.<sup>9</sup> In particular, Shafaeddin (2002) noted that China has a growing educated labour force with potential to increase high value added production and exports in the coming decades. Rao (2008) also observed similar trends in Brazil, Russia and India. Johnes *et al.* (2011:13) also found evidence to suggest that higher education in Brazil and India have been receiving a great deal of attention and noted that this can “tilt the economy’s comparative advantage towards the production of goods and services that are more skill intensive.” In principle, the rise of BRICs can provide a new engine for CARICOM’s growth in the future as well as an obstacle through their growing competitive strength in the global economy especially from China and India. This final section identifies some issues that CARICOM policymakers would confront from the growth of BRICs in the coming decades. These effects are important for the region to recognize as they can occur directly or through CARICOM relations with third countries. BRICs offer several opportunities for the region in terms of trade, investment, development assistance and tourism.

In terms of trade, the literature identifies two effects that emerging markets can have on the global economy; these are the complementary effect and the competitive effect. For most CARICOM countries the complementary trade effect is likely to occur through increased demand for natural resources and other primary products. In fact, based on data from Tables 5 and 9, it appears that Brazil, Russia, India and China presently represent potential export markets for fuel, food, agricultural products, and raw materials. Most countries in the region especially Trinidad and Tobago, Jamaica, Guyana, Suriname and some of the smaller islands have export potential in some of these areas (Tables 16 and 17). Notably, the level of exports from CARICOM to BRICs is presently low and concentrated in raw

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<sup>9</sup> The N-11 refers to the next group of emerging markets which includes Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, South Korea, Turkey, and Vietnam.

materials and primary products (Table 14). While the region can benefit immensely from 'commodity booms' it would have to be concerned with the risk of being trapped with a production structure that is heavily biased towards low value added natural-resource based products. IMF (2011) emphasized this point and also noted that LIC's would have to be wary of the classic Dutch Disease effects associated with commodity booms especially from China and India (see also Jenkins and Peters, 2006; Kaplinsky and Farooki, 2010; Kaplinsky *et al.*, 2010).

Additionally, BRICs growing share in world outward FDI can have complementary growth effects on capital starved economies in the region. In particular, the growth that emerging markets are expected to experience in the coming decades would increase their appetite for energy resources and primary products which can play a significant role on directing their outbound FDI into resource intensive sectors.<sup>10</sup> This trend is already being observed in some CARICOM member states where Chinese and Indian firms are investing in their energy and resource based sectors while Brazil has already expressed interest in Trinidad and Tobago's energy sector (see Table 26).<sup>11</sup> The downside of this is that CARICOM countries can face a long term challenge of diversifying their economy into other manufacturing and high value added products as BRICs exert upward pressure on demand and prices for energy and primary products through outbound investments and trade.<sup>12</sup> While BRICs outward investments have focused largely on securing natural resources in the past, Mlachila and Takebe (2011) noted that in recent years outbound investments from BRICs are spreading into non-resource intensive sectors. For example, India's

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<sup>10</sup> In most cases, China and India also provide lucrative developmental assistance and grants to many small developing economies.

<sup>11</sup> According to the Rachovich (2011) all four BRICs are ranked among the top 21 oil consumers in the world for 2010. China is the second largest consumer of oil, followed by India in fourth, Russia in fifth place and Brazil in seventh position. Oil consumption for the combined BRICs is approximately 18.5 million barrels per day and is almost equal to that of the USA which stands at 19.1 million barrels per day. This is expected to increase rapidly in the coming decades especially from China and India. In fact, according to a recent study china's demand for oil is expected to rival that of the USA by 2040 (Barker Institute Energy Forum, 2011).

<sup>12</sup> Lall and Weiss (2005:22) observed that the pattern of trade between Latin America and China appears to reinforce the "classic ... colonial trade between developing countries and industrialized regions ... with the former specializing increasingly in primary and resource based products and the latter in manufacture."

outward FDI in Africa and Asia are increasing in areas such as manufacturing and services while Brazil's FDI is focused on energy resources and China is increasingly moving into areas such as agriculture, manufacturing and services (Mlachila and Takebe, 2011). To attract investments in these areas the CARICOM region would have to cultivate an attractive business environment to encourage foreign firms in non-resource intensive sectors so as to improve the productive capacity in the region and advance the growth of local industries in global supply chains.<sup>13</sup>

The challenge for most CARICOM countries in this regard is to improve its export performance with BRICs given their growth potential in the coming decades in areas other than natural resource based products.<sup>14</sup> This can be done by developing stronger trade complementarity with BRIC economies in high value added products. This would ensure that the ensuing growth of BRICs and its FDI inflows into the region is directed to activities that would boost the competitiveness of domestic industries and facilitate diversification across the production spectrum. There is no shortcut method to do this but by developing the requisite institutional and production capabilities to attract investments and increase production of goods and services in those areas where the potential demand in emerging markets is projected to be high especially in non-resource related sectors.

The engine for economic growth and revenue earnings in many Caribbean economies is their tourism industry. In this regard, outbound tourism from BRICs, although mentioned already is arguably one of the most important highlights for CARICOM. This paper argues that for the region to take full advantage of outbound tourism from BRICs the region would have to design a CARICOM- BRIC tourism strategy in order to attract the BRIC tourist given that their motivation for travelling differs largely from those of traditional markets (Table 23). Furthermore, there are several challenges facing CARICOM's tourism industry at present that has the potential to hinder its growth. Some of these include security issues such as violent and

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<sup>13</sup> Most CARICOM countries have a relatively low rank in terms of the ease of doing business. St. Lucia is the highest ranked member at 52<sup>nd</sup> out of 183 countries. Other top ranked CARICOM members are Antigua and Barbuda (57<sup>th</sup>) and Dominica (73<sup>rd</sup>), (World Bank, 2010).

<sup>14</sup> The intention here is not to downplay the resource-intensive sectors in the region but to recognize the importance of attracting investments in other areas of production activity to facilitate the diversification process.

criminal attacks against tourists in some Caribbean destinations. These unfortunate incidents have led major outbound markets to issue travel advisories warning their citizens about visiting these islands. Other issues include improvements in direct air transportation between CARICOM and countries such as China and India to facilitate the easy flow of potential tourists.<sup>15</sup>

The competitive effect that BRICs pose to CARICOM can occur directly or through third markets and may originate largely from China and India in specific areas. Lall and Weiss (2005) noted that China's competitiveness in labour intensive technology products relies strongly on its low labour cost which also attracts export oriented FDI into high technology areas. In fact, Welo (2011) argued that China represents a long-term competitive threat in the global economy especially in low-knowledge intensive products such as clothing and textile. India also continues to play a dominant role in the services industry. Freeman (2008) also argued that the rise of China and India has negatively affected labour markets in many developing countries especially in low-wage sectors. For example, Freeman noted that countries such as Peru, El Salvador, Mexico, and South Africa are facing a major challenge in achieving economic growth through low-wage production on account of China and India. In fact, Lora (2005) found evidence to infer that between 2001 and 2003 approximately 254,000 jobs were lost in the maquilas of Mexico to cheap Chinese imports while over 130,000 jobs were lost in Sri Lanka's garment industry according to Perera (2000).<sup>16</sup> The effect of cheap Chinese labour is already being experienced in CARICOM especially in the construction sector. For example, most of China's infrastructural projects, investments and economic activities in the region utilize Chinese resources such as raw materials and cheap Chinese labour.

This trend has created a lot of debate in the domestic labour market especially in Trinidad and Tobago and Barbados where domestic workers view the influx of Chinese workers as a threat especially in the presence of

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<sup>15</sup> Inter-island travel among CARICOM members has been improving in recent times with the introduction of a new low cost air-carrier (Redjet) in 2011 and an inter-island ferry by the end of 2012. This is expected to boost not only domestic tourism but also the flow of international tourists travelling between member states.

<sup>16</sup> Peters (2007, 39) also noted that "Mexico's effort to build an export-led economy with low-cost labour has proved unable to stand up to Asian, and in particular Chinese, competition."



high domestic unemployment. Additionally, Ceres (n.d.) noted that Guyana's clothing and textile industry is also facing increased competition from China and India in both the regional market as well as the extra-regional market. Cheaper products from BRICs also have the potential to displace CARICOM firms in their traditional extra-regional markets as well as in the regional market. Furthermore, as BRICs strengthen their competitiveness across the production spectrum these effects would expand into other areas and CARICOM firms would have to take stock of these changes.

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UNITED NATIONS WORLD TOURISM ORGANIZATION (UNWTO) -  
Available at: [www.unwto.org/](http://www.unwto.org/)  
WORLD DEVELOPMENT INDICATORS - Available at:  
<http://databank.worldbank.org>

## APPENDIX

### Indices of Trade Intensity, Trade Complementarity and Trade Bias

A trade intensity index ( $TII_{ij}$ ), trade complementarity index ( $TCI_{ij}$ ) and trade bias index ( $TBI_{ij}$ ) for country  $i$ 's export trade to country  $j$  are

A trade intensity index ( $TII_{ij}$ ), trade complementarity index ( $TCI_{ij}$ ) and trade bias index ( $TBI_{ij}$ ) for country  $i$ 's export trade to country  $j$  are

formulated as follows:

$$\begin{aligned}
 \text{III}_{ij} &= \frac{X_{ij}}{X_i} / \frac{M_j}{M_w - M_i} \\
 \text{TCI}_{ij} &= \sum_k \left\{ \frac{X_i^k * M_j^k}{X_i * M_j} * \frac{M_w - M_i}{M_w - M_i^k} \right\} \\
 \text{TBI}_{ij} &= X_{ij} * \sum_k \left( \frac{M_w^k - M_i^k}{X_i^k * M_j^k} \right).
 \end{aligned}$$

Where X refers to export, M refers to import, i refers to country i, j refers to country j, w refers to the world, and k refers to SITC-3 digit commodities, see Drysdale (1967), Drysdale and Garnaut (1982) and Yamazawa (1970). Values of  $I_{ij}$ ,  $C_{ij}$ , and  $B_{ij}$  greater than unity indicate an intensive trading relationship between i and j, complementary trade structures and special country bias between i and j respectively. The revealed comparative advantage index based on Balassa (1965) compares the export performance of a country in an industry in relation to a set of countries or the world. The Balassa index is used in this paper to assess the competitiveness of CARICOM's export to BRICs for commodities classified at the HS-4 digit level. In this regard the index is formulated as follows:

$$\text{RCA}_i = \frac{X_{ci}}{X_{ct}} / \frac{X_{wi}}{X_{wt}}.$$

Where X refers to export, c refers to CARICOM, i refer to HS 4 digit commodities, t refers to total and w refers the world. CARICOM is deemed to have a comparative advantage in a commodity if  $\text{RCA}_i > 1$  and a comparative disadvantage if  $0 < \text{RCA}_i < 1$ . The relevant data for these indices are available from the authors.