INDIA - BRAZIL - SOUTH AFRICA TRADE FLOWS AND AGENDA FOR MARITIME TRANSPORT SERVICES

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ABSTRACT

The main purpose of this article is to analyze maritime transport services among the India – Brazil – South Africa (IBSA) countries and to evaluate their impacts on the trilateral trade. Imbalances in trade flows tend to increase costs of services being offered. A more intense trilateral trade will favour economies of scale in transport services. Several steps can contribute to reduce transport costs. Greater efficiency in the port terminals of the three countries should be promoted to reduce transit time. The main intra-IBSA freight transhipment operations should be concentrated in a South African port. For this purpose, a cargo storage structure should be set up next to the selected port (e.g. Durban) which would then concentrate cargo to be used by Brazilian and Indian companies to their hub ports. Such advances will ensure greater efficiency, transparency and predictability to trade, reducing the cost of intra-bloc exports and imports. In addition, involved governments should, in partnership with other public and private agents, seek to reduce structural asymmetries in their maritime sectors.

Keywords: maritime transport, trade flows, India – Brazil - South Africa (IBSA) Forum.

INTRODUCTION

Fragile connections between India, Brazil and South Africa (IBSA) and its adverse effects on the development of foreign trade among these countries led the transport issue to be a priority topic on the trilateral agenda. It has been established a working group under IBSA Forum to identify solutions that involve establishing effective intra-block transport linkages.

Effective intra-IBSA transport linkages are important to ensure success of the IBSA Forum initiative. Long distances, such as the one between Brazil and India, tend to result in higher transport costs, which, obviously, have negative impacts on trade flows. Lower exchange flows usually lead to diseconomies of scale in transport services, contributing to press connection costs increasing.

Some major steps have been taken to create intra-IBSA better transport connections, especially through new trilateral agreements on maritime and air transport. The problem, however, stands.

This paper seeks to map out the current status of intra-IBSA maritime connections and to evaluate their impacts on the trilateral trade. Section 2 describes exchange flows among IBSA countries, with emphasis on trade between Brazil and the two other partners. Section 3 provides a detailed description of the available maritime transport linkages, as well as a summary of transport-related bilateral and trilateral agreements. Conclusions and recommendations are presented in the fourth and last section.

INTRA-IBSA TRADE FLOWS

2004-2008 Period. The establishment of the IBSA Forum achieved its purpose to increase commercial exchange among its partners (Figure 1). The trilateral trade went from US$ 4.95 billions in 2004 to US$ 11.96 billions in 2008, a more than 140% growth, or an average rate of 24,6% per year.

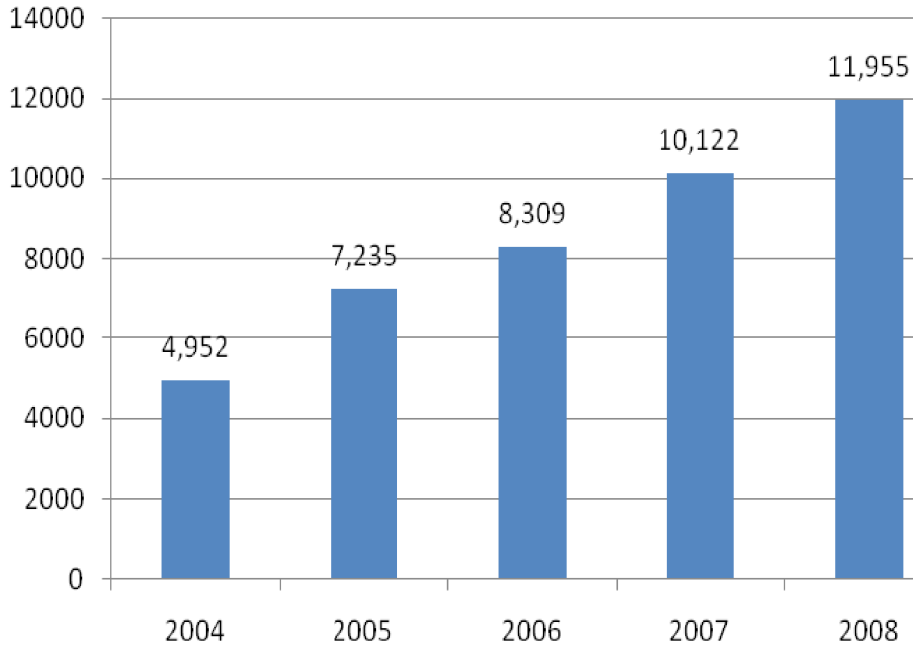

Figure I – IBSA: Evolution of Trilateral Trade – 2004-2008 (US$ million) (Brazil's Ministry of Development, Industry and Foreign Trade of Brazil; Export and Import Database - Department of Commerce of India; Department of Commerce of South Africa)

Trade among IBSA countries increased in higher rates than the trade growth of each partner with the rest of the world (Table I). In the period 2004-2008, South Africa's trade flow increased 86% (16,8% per year), while exchange with other IBSA partners increased 250% (36,8% per year).

Table I – IBSA: Trade Flow Evolution– 2004-2008 (in percentage) (Brazil's Ministry of Development, Industry and Foreign Trade; Export and Import Database - Department of Commerce of India; Department of Commerce of South Africa)

Evolution of Trade Flow		South Africa	Brazil	India
Total	Total Var.	86,3	132,7	192,0
	Average Annual Rate	16,8	23,5	30,7
With IBSA Partners	Total Var.	250,3	186,2	221,7
	Average Annual Rate	36,8	30,1	33,9

However, intra-IBSA trade still is less representative when compared with the total volume that Brazil, India and South Africa trade with the rest of the world (Table II). From 2004 to 2007, none of these three countries were among the 10 main commercial partners of the other two. Only in 2008 India was the 7th among the leading exportation markets of South Africa and the 10th among the leading importation markets.

Table II – IBSA: Share of the Partners in Bilateral Trade Flows – 2004-2008 (in percentage) (Brazil's Ministry of Development, Industry and Foreign Trade; Export and Import Database - Department of Commerce of India; Department of Commerce of South Africa)

Country	Partner	2004	2005	2006	2007	2008
India	Exports					
	South Africa' share	0,84	1,18	1,48	1,78	1,63
	Brazil' share	0,43	0,81	1,06	1,15	1,54
	Imports					
	South Africa' share	2,43	1,97	1,66	1,33	1,44
	Brazil' share	0,40	0,71	0,60	0,53	0,38
	India´s Total Trade					
	South Africa' share	1,72	1,63	1,59	1,51	1,51
	Brazil' share	0,41	0,75	0,79	0,78	0,84
Brazil	Exports					
	South Africa' share	1,07	1,16	1,06	1,09	0,89
	India' share	0,68	0,96	0,68	0,60	0,54
	Imports					
	South Africa' share	0,43	0,46	0,48	0,43	0,44
	India' share	0,89	1,63	1,61	1,80	2,08
	Brazil´s Total Trade					
	South Africa' share	0,82	0,89	0,83%	0,81	0,68
	India' share	0,76	1,22	1,06%	1,11	1,26
South Africa	Exports					
	Brazil' share	0,61	0,69	0,75	0,82	0,50
	India' share	2,23	1,41	1,92	2,82	3,72
	Imports					
	Brazil' share	2,39	2,03	2,09	1,87	2,07
	India' share	2,01	2,37	2,24	2,51	2,62
	South Africa´s Total Trade					
	Brazil' share	1,32	1,51	1,06	1,46	1,73
	India' share	1,37	2,09	1,44	2,09	3,33

Effects of the World Financial Crisis. From January to August 2009, intra-IBSA trade reached US$ 6.6 billions, an amount US$ 1.1 billion lower than the recorded on the same period in 2008, which means a decrease of 14,8% (Figure 2). However, this impact occurred asymmetrically. While commerce of Brazil and India with South Africa presented significant falls – of 35,2% and 19,5%, respectively –, Brazil-India trade increased 1,8% (from US$ 2,937 millions to US$ 2,991 millions).

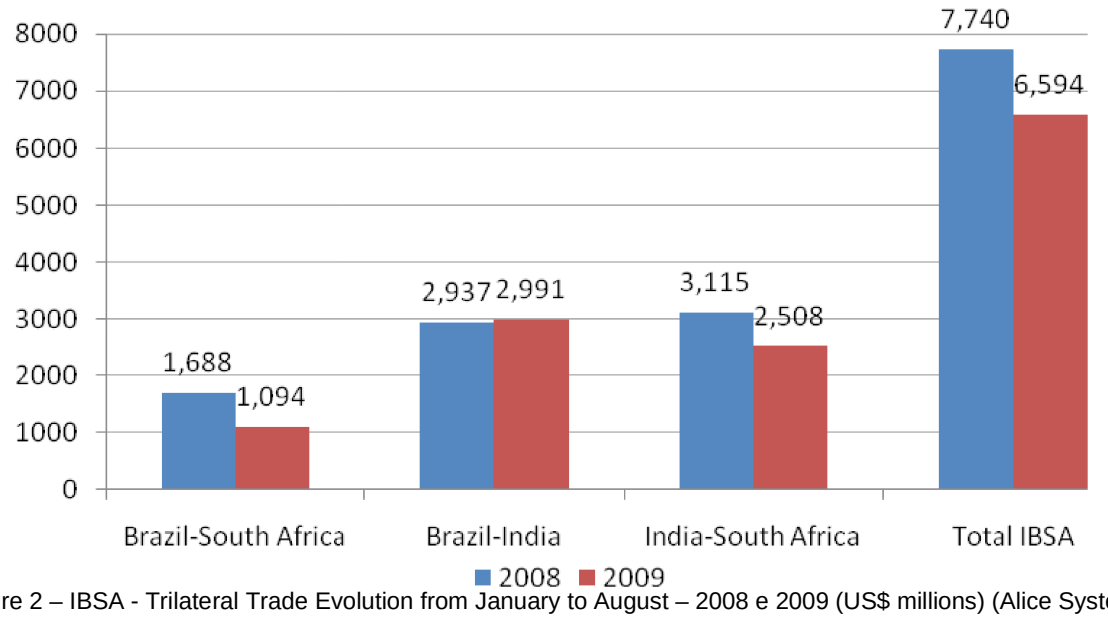

Figure 2 – IBSA - Trilateral Trade Evolution from January to August – 2008 e 2009 (US$ millions) (Alice System/ Ministry of Development, Industry and Foreign Trade; South African Department of Commerce)

Increasing trade between Brazil and India in the first eight months of 2009, *vis-à-vis* the same period of the previous year, is explained by a significant increase of Brazilian exports to the Indian market (Table III). Exports went from US$ 705 millions (January to August 2008) to US$ 1,695 millions in the same period of 2009, a 141% growth. Yet, exchanges in the opposite direction recorded a very significant 42% decline. Brazilian imports from India dropped from US$ 2,233 millions to US$ 1,296 millions, from January to August 2009.

Table III - IBSA: Evolution of Exports and Imports from January to August – 2008 and 2009 (US$ millions) (Brazil's Ministry of Development, Industry and Foreign Trade; South African Department of Commerce)

Origin Country	Destination Country	Jan-Aug/2008	Jan-Aug/2009	Total Var.	% Var.
Brazil	South Africa	1,185.4	812.4	-373.0	-31.5
Brazil	India	704.5	1,695.2	990.7	140.6
South Africa	Brazil	502.3	282.0	-220.3	-43.9
India	Brazil	2,232.9	1,296.1	-936.8	-42.0
India	South Africa	1,476.5	1,433.5	-43.0	-2.9
South Africa	India	1,638.6	1,074.4	-564.2	-34.4
Total Trilateral Trade		7,740.2	6,593.6	-1,146.6	-14.8

INTRA-IBSA MARITIME TRANSPORT SERVICES

Improving maritime transport linkages, which is responsible for about 99,5% of the handled cargo trilaterally, constitutes one of the main challenges for the IBSA Forum. Precariousness of the currently available maritime connections results in high transport costs, which in turn tend to have negative impacts on trade flows (RIS, 2007).

Several studies (Limao and Venables, 2001; Hummels, 1999) show that high international transport costs can affect foreign trade, similarly to custom tariffs and exchange rates, since:

> "a reduction in transport costs stimulates exports and imports directly, just like exchange rate appreciations make exports more competitive - as the price of domestic products become cheaper in foreign currency –, and lower domestic custom tariffs make imported products cheaper" (ECLAC, 2002).

Unfortunately, there are very few direct connections between Brazil, India and South Africa. Most transport operations involve transhipment, which pushes transport costs up and makes the journey longer. For bulk transportation, for instance, which is the cargo type accounting for the highest share of the trilateral trade, there are no direct routes within the three countries.

In the specific case of the Brazil - South Africa connection, most bulk cargo is transported in special ships with a capacity of up to 300,000 tonnes of gross weight (TGW). For some types of cargo, the lack of return freight has been solved. Brazil, for example, exports iron ore to South Africa and imports coal using the very same ships. However, ships operating along this stretch do so as part of longer routes, which go as far as East Asia. Although they sail along the Indian coast, they do not stop in the country.

There is a single company that operates scheduled routes linking the three countries for container cargo: the Chilean CSAV, with fortnightly frequency. In both Brazil-South Africa and South Africa-India links, competition is fiercer. From Brazil to South Africa, the following companies operate with fixed frequencies: MSC, Maersk Line / Safmarine, CMA-CGM, Hamburg Süd. From South Africa to India the following companies are present in the regular transportation: CMA-CGM, Hamburg Süd, Mitsui Osk Line, Maersk Line, MSC and Pacific International Lines.

Regarding Brazil-India flows, most of shipping companies offer weekly maritime services and fixed day of departure, but with transhipment operations in European ports, mostly in the Mediterranean and/or the Middle East (Figure 3).

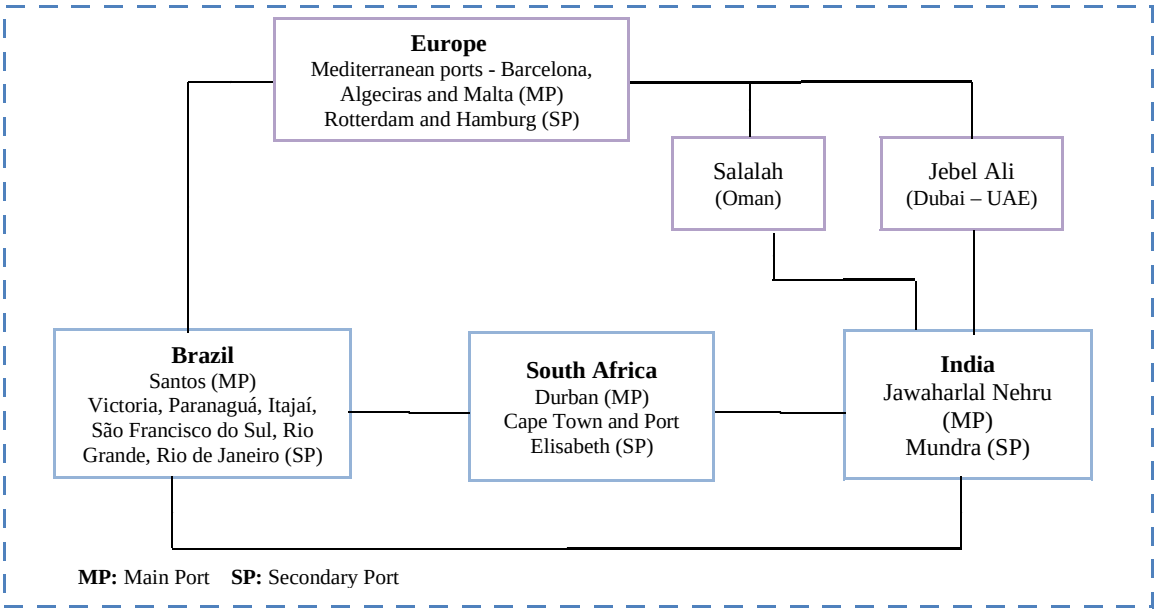

Figure 3 – IBSA – Main Regular Maritime Routes

From 2007 to 2008, CMA-CGM operated a route interconnecting the three IBSA countries, called Vasco Express. This route had duration of 56 days, on a weekly basis. It operated eight container carrier vessels with a capacity between 1.713 TEU and 2.556 TEU, serving 10 ports in six countries. This route was initiated when a Brazilian company got a large contract to provide frozen chicken to India, which led CMA-CGM to try attracting additional cargo capable of commercially justify the route. As long as the large contract was valid, average occupancy of the vessels varied from 60% to 70%, from Brazil to India, and from 10% to 25% on the opposite way. After contract ending, the company decided to discontinue the route, due to the lack of minimum cargo.

In the light of what was presented above, what should one investigate? Despite increasing trade flows registered in recent years, why are maritime linkages still so sparse?

To answer this question, one must understand how maritime transport is organised in the globalised world. Regulations applied to this activity are rather heterogeneous. They involve market reserve in certain routes and freedom to bear any flag in others. In the latter case:

> "any operator can, regardless of its nationality or company location, provide maritime transport services for trade purposes that are not contemplated in cargo reservation or coasting trade agreements" (Carvalho, 2004).

Since the 1990s, all major shipping companies started to work with the hub port concept, a port that concentrates cargo and navigation lines. The adopted strategy by main maritime companies counted on increasing the size of the vessels also with a regard in expanding demand for containers, reducing the unit cost by a better balance of fixed and variable costs.

Obviously, companies sought to concentrate their routes, which are supplied by feeder lines. This strategy also reduces stopovers, so ships spend less time in port operations, can be

used in a higher number of trips per year and, above all, they keep a high rate of used capacity. The load generator potential is a critical factor to consider when choosing a hub port.

> "what the shipowners intend when choosing a hub port is to ensure that there is a large number loaded and unloaded containers, in the shortest time possible and with attractive rates." (Vieira, 2002).

So a significant part of intra-bloc maritime transport, offered on regular basis, have at least one transhipment operation. Region´s navigation companies, seeking for scale economies, are likely to concentrate cargo on a few number of routes, which tend to converge on few hub ports, mainly in the Mediterranean and the Middle East (Lacerda, 2004).

The Cost of Intra-IBSA Maritime Transport

Maritime transport cost is determined by a set of factors (Figure IV). The main one, that explains for about two thirds of the total, correspond to the basic fare, that is, the amount charged by the ship operator to the shipper, considering origin and destination ports. The remaining third consists of a set of port and government fees arising from the regulatory environment, insurances and other shipment costs, stowage and setting down.

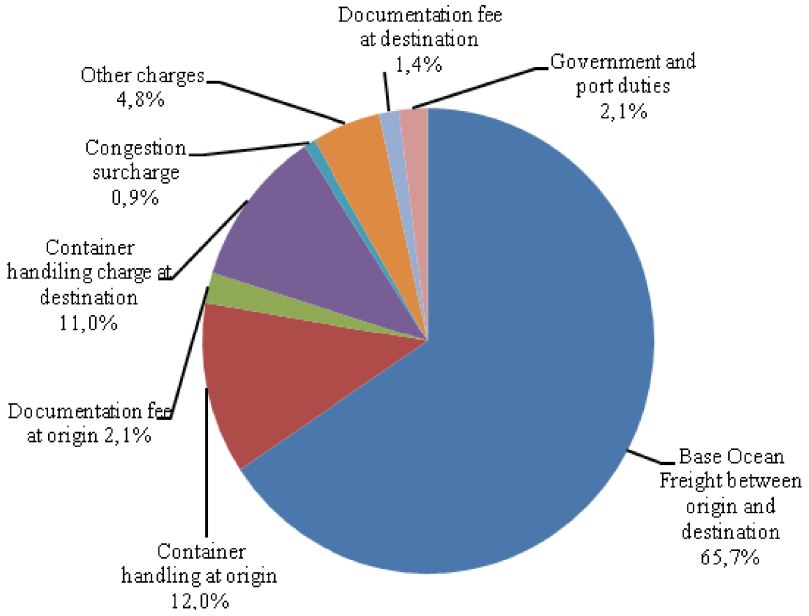

Figure 4 – Components of Maritime Transport Cost – 2007 (%) (Maersk Sealand; De and Rout, 2008)

Base fare is determined by the operational efficiency of the deep-sea navigation and by some of factors, including those listed below:

Economies of scale: The larger are the transported volumes of cargo, lower tend to be per tonne costs. As stated before, trade between the IBSA Forum countries grew signicantly from 2004 to 2008. In 2009, the trilateral trade fall was lower than the one suffered by the

overall foreign trade of the bloc's three countries. However, the commercialized volume intra-IBSA is still little representative if compared with the total amount that Brazil, India, and South Africa trade. This is a crucial issue which remains without solution. Consequently, from the point of view of deep-sea transportation, routes interconnecting IBSA countries are considered secondary routes and are served by small vessels comparing to the ones that travel on the main routes, which usually follow the North-North direction. Smaller vessels mean smaller scale economies and, normally, less fast ships which prolong transit time and result in higher unit costs.

Provision of regular shipping services: Higher are the number of regular routes between two countries, which is determined fundamentally by the volume of bilateral trade, lower tend to be the prices of the maritime services. Directly related to the former matter, this issue regards relatively small intra-IBSA trade volume There isn't enough demand to attract navigation companies to operate direct connections between India, Brazil and South Africa. Consequently, competition remains low.

Competition with other modes, especially with land transport: When maritime transport coexists with an alternative transport mode, average costs tend to diminish, as a result of modal competition. In the IBSA bloc, the only alternative to maritime transport is air transportation. Because of its much higher costs, one can say, therefore, that the intra-IBSA shipping services has no other competitors, which prevents costs reductions due to competition with other transport modes.

Distance: Transport costs vary with distances in each case. In consequence of long distances involved, a round trip between Brazil and India, with a stopover in South Africa only for refueling, takes at least 56 days, given the characteristics of the vessels currently in operation on that path.

Table IV shows fare values for India to import containerized goods, from 1996 to 2006. Fares from countries of both North (U.S. and Canada) and South America (Brazil and Argentina) are considerably higher than those in the Middle East or Southeast Asia, closer to India.

Imports value for imports originated in South Africa to India, in 2006 were about US$ 5,400 / TEU, much higher than Australia’s US$ 4,398/TEU, even if Australia is located at a greater distance. This is related to scale issues, since volume of Indian imports from Australia is about three times larger than the South African exports to India.

Table IV – India: Maritime Transport Costs Evolution of Imports from Selected Countries – 1996-2006 (De and Rout, 2008)

Country	Distance between capitals (km)	India´s Imports (%)	Maritime Transport Costs			
			(US$/ TEU)	(US$/ TEU)	Absolute Var. (%)	Average Annual Var. (%)
		2008	1996	2006	1996-2006	1996-2006
China	3,775	10.77	1,104	2,289	107.3	7.6
Unites States	12,040	8.36	3,550	6,522	83.7	6.3
Saudi Arabia	3,050	7.71	2,091	3,843	83.8	6.3
United Arab Emirates	2,316	5.36	890	1,672	87.9	6.5
Iran	2,540	4.34	882	1,870	112.0	7.8
Germany	5,773	3.92	1,890	3,809	101.5	7.3
Singapore	4,147	3.23	1,204	2,230	85.2	6.4
Australia	10,348	3.11	2,785	4,398	57.9	4.7
Kuwait	3,835	3.06	1,882	2,198	16.8	1.6
Japan	5,835	2.54	1,131	2,668	135.9	9.0
France	6,581	2.49	1,987	3,872	94.9	6.9
Korea	4,681	2.40	1,178	2,310	96.1	7.0
Malaysia	3,839	2.39	741	1,877	153.3	9.7
United Kingdom	6,707	1.97	1,676	3,103	85.1	6.4
South Africa	**7,998**	**1.44**	**2,090**	**5,400**	**158.4**	**10.0**
Canada	11,325	0.78	3,209	7,634	137.9	9.1
Brazil	**14,231**	**0.38**	**5,320**	**7,023**	**32.0**	**2.8**
Argentina	15,791	0.36	6,938	8,220	18.5	1.7

Considering average total cost of maritime transport per container (Figure V), the highest value refers to the imports from Brazil – US$ 7.805/TEU in 2006 –, while the third highest value refers to imports originated in South Africa – US$ 6.812/TEU. This cost also includes all other costs to carry the goods from their origin to their final destination. That means, in cases of Brazil and South Africa, cost structure of port charges and government fees are an additional pressure on total costs of basic maritime fare to India, which already is very high.

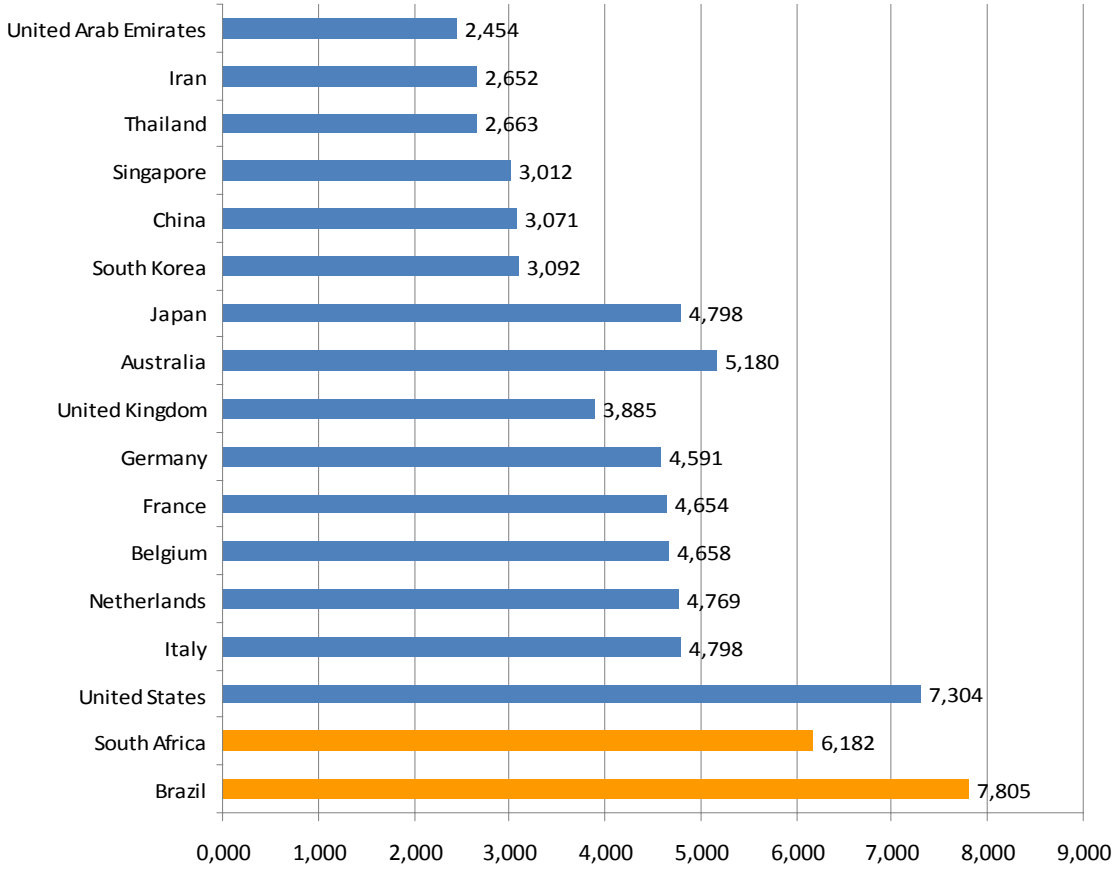

Figure 5 – Indian Imports - Total Transport Costs for Selected Countries (US$/TEU) (De and Rout, 2008)

Imbalances in trade flows: In terms of both volume and nature of traded goods, a more balanced commercial exchange between two countries tend to lower transport costs due to non-occurrence of the so-called "empty" in the return fare. When analyzing IBSA´s bilateral flows evolution, one can notice significant trade imbalances that persist over time (Table V). Trade surpluses or deficits are reflected in imbalances also in terms of handled cargo volumes in both directions.

Table V – IBSA: Evolution of Trade Balance – from 2004 to 2009 (US$ millions) (Brazil's Ministry of Development, Industry and Foreign Trade; South African Department of Commerce)

Origin	Destination	2004	2005	2006	2007	2008	2009(*)
Brazil	India	96,5	-65,0	-535,1	-1.207,2	-2.462,0	399,2
Brazil	South Africa	769,1	1.029,6	1.027,9	1.235,5	981,9	530,3
India	South Africa	-1.359,8	-1.213,6	-944,9	-225,0	45,6	-359,1

There are imbalances also in traded goods that require different vessels types (Table VI). Brazil-South Africa exchange is an exception, which presents a fairly balanced distribution between commodities and manufactured goods, in both directions.

Table VI - IBSA: Trade Evolution by Products Nature – Average 2004-2009 (%) (Brazil's Ministry of Development, Industry and Foreign Trade; South African Department of Commerce)

Origin	Destination	Raw	Manufactured	Especial Operations	Total
Brazil	India	27,5	72,5	0,1	100,0
India	Brazil	1,8	98,2	--	100,0
Brazil	South Africa	17,6	82,3	0,1	100,0
South Africa	Brazil	16,9	83,1	--	100,0
South Africa	India	40,2	59,8	--	100,0
India	South Africa	2,7	97,3	--	100,0

These two overlapping factors hamper shipping companies to organize their routes efficiently, since they increase possibilities of generating "empty" cargo in return fare rates, which tends to raise total cost of transport operation.

Transhipment: Lower the number of ports between source and destination of goods, lower tend to be shipping costs. Regarding transportation of bulk cargos, there are only direct links between Brazil and South Africa and between South Africa and India. Therefore, bulk handling between Brazil and India is made, in most cases, through Europe, which implies involvement of more than one operator and longer transit time. Containers have more offered services between South Africa-Brazil and South Africa-India. In the Brazil-India connection, only one company provides biweekly transportation services and fixed day of departure. Others provide transhipment operations in Mediterranean ports such as Malta, Barcelona and Algeciras - or the Middle Eastern ports, especially Dubai Jebel Ali located in the United Arab Emirates, and Salalah located in Oman.

Port Infrastructure: The three countries have together almost 16 thousand kilometers of shoreline. For deep-sea navigation, 56 private-use ports or terminals are available, most of which, 36 (64%), are located in Brazil. India ranks second, with 13 ports (23%), and South Africa ranks third, with seven port facilities (12.5%). IBSA port systems are regulated by the government, notwithstanding an increasing participation of the private sector in this segment.

From 2005 to 2007, Brazilian state-owned ports and private-use terminals accounted, in average, for 46% of the cargo involved in the global foreign trade of the three countries, a volume equivalent to 511.7 million tons (MT). During the same period, India’s cargo exports and imports amounted to 423.6 MT (38%), while for South Africa the volume was 179.0 MT (16%).

The region’s largest port in terms of total cargo volume is Tubarão, located in Brazil's southeast region (Table VII), which specializes in solid bulk cargo. Tubarão is the largest iron ore and pellet exporting port in the world, with a capacity to operate up to 90 million tons per year. It integrates a modern railroad, whose logistics facilitates an efficient production flow

from main states of Brazil's mid-east region directly to very-large crude carriers (VLCC) and ultra-large crude carriers (ULCC).

Table VII – IBSA: Cargo Movement involved in Foreign Trade Operations by Country and Main Ports – 2005-2007 (Antaq/Port Statistics Yearbook of Brazil; National Port Authority/Statistical Yearbook of South Africa and Indian Ports Authority/Operational Statistics of India)

Country and Main Ports	2005		2006		2007		2006/ 2005 %	2007/ 2006 %	Rank 2007
	MT	Share %	MT	Share %	MT	Share %			
Brazil	**473**	**46**	**503**	**46**	**559**	**46**	**6**	**11**	**--**
Tubarão	98	10	93	8	104	9	-4	11	1
Itaquí	79	8	86	8	91	8	10	6	3
Itaguaí	66	6	74	7	86	7	12	17	4
Santos	65	6	67	6	70	6	4	5	5
Other	167	16	183	17	208	17	10	14	--
India	**384**	**37**	**423**	**38**	**464**	**39**	**10**	**10**	**--**
Vishkhapatman	50	5	56	5	56	5	11	1	6
Chennai	44	4	47	4	53	4	8	13	7
Kandla	42	4	46	4	53	4	11	15	8
Mumbai	35	3	44	4	52	4	26	19	9
Other	213	21	230	21	249	21	8	8	--
South Africa	**174**	**17**	**180**	**16**	**183**	**15**	**4**	**2**	--
Richards Bay	87	8	86	8	85	7	0	-2	2
Saldanha Bay	35	3	38	3	44	4	7	16	10
Durban	41	4	44	4	42	4	8	-5	11
Other	11	1	12	1	13	1	10	10	--
IBSA	**1,030**	**100**	**1,106**	**100**	**1,206**	**100**	**7**	**9**	**--**

Richards Bay port, which is also specialized in solid bulk cargo, accounts for almost 50% of all port operations in South Africa. Three Brazilian ports – Itaquí, Itaguaí and Santos - rank next, while only Indian ports – Vishakhapatnam, Chennai, Kandla and Mumbai - rank from sixth to ninth.

IBSA movement of containerized cargo registered a significant growth. From 2004 to 2007, the volume of containerized cargo from Brazil, South Africa and India increased from 10.7 million TEU (MTEU) to 12.7 MTEU, which is equivalent to a growth of 42% (Table VIII). Brazil, which up until 2006 registered the most intense movement of containers, was exceeded in 2007 by India.

Table VIII – IBSA: Container Movement by Country – 2004-2007 (Antaq/Port Statistics Yearbook of Brazil; National Port Authority/Statistical Yearbook of South Africa and Indian Ports Authority/Operational Statistics of India)

Country	2004		2005		2006		2007		Média 04-07		Var. (07/03)
	MTEU	%	MTEU	%	MTEU	%	MTEU	%	MTEU	%	
Brazil	4,2	39	4,7	40	5,1	38	5,4	37	4,9	38	29.3
India	3,9	36	4,2	35	4,7	36	5,5	38	4,6	36	42.1
South Africa	2,6	25	3,0	25	3,4	26	3,7	25	3,2	25	41.0
IBSA	10,7	100	12,0	100	13,2	100	14,7	100	12,7	100	42.1

The largest container port in IBSA is the Indian port of Jawarlahal Nehru, located in the west coast of the Country, near Mumbai. In 2007, its movement hit the mark of 2.65 MTEU, which is equivalent to 59.5% of all deep-sea operations involving this type of cargo in India (Table IX). In the same year, the Santos port (Brazil) ranked second, with a volume of 2.27 MTEU (41.7%), equivalent to 42.2% of the total domestic movement. The South-African port of Durban, with 2.07 million TEU, ranked third. Together, these three ports accounted for 53.5% of the containers total movement in IBSA ports from 2004 to 2007.

Despite the availability of a large port infrastructure, fact is that IBSA bloc countries have deficit in this area. In general, these countries ports system provide less favorable performance compared with major international ports in terms of capacity, productivity and efficiency, which adds to the cost of intraregional transport. Often main bulk and container ports of the three countries have congestion problems.

For example, according to the Brazilian Confederation of Agriculture and Livestock calculations, bottlenecks in Brazilian port infrastructure caused damage estimated between US$ 3 billion and US$ 5 billion in 2007-2008 season, due to fines payment and demurrage fees for delays in departures and arrivals.

Table IX – IBSA: Container Movement by Country and Main Ports – 2004-2007 (Antaq/Port Statistics Yearbook of Brazil; National Port Authority/Statistical Yearbook of South Africa and Indian Ports Authority/Operational Statistics of India)

Country and Port	2004		2005		2006		2007		Average 04-07		Var. 07/ 04	Rank 2007
	MTEU	%	MTEU	%	MTEU	%	MTEU	%	MTEU	%		
Brazil												
Total	**4,206**	**100**	**4,727**	**100**	**5,082**	**100**	**5,438**	**100**	**4,863**	**100**	**29**	**--**
Santos	1,639	39	2,109	45	2,199	43	2,266	42	2,053	42	38	3
Itajaí	525	13	597	13	651	13	669	12	610	13	27	6
Rio Grande	505	12	564	12	531	10	536	10	534	11	6	7
Parana-guá	271	7	291	6	341	7	399	7	326	7	47	9
Rio de Janeiro	316	8	297	6	307	6	354	7	319	7	12	10
São Fco. Sul	271	6	194	4	180	4	301	6	236	5	11	12
Others	678	16	675	14	874	17	914	17	785	16	35	--
India												
Total	**3,900**	**100**	**4,233**	**100**	**4,744**	**100**	**5,541**	**100**	**4,605**	**100**	**42**	**--**
Jawarlah alNehru	2,269	58	2,371	56	2,667	56.	3,298	60	2,651	58	45	1
Chennai	539	14	617	15	735	16	886	16	694	15	64	5
Tuticorin	254	7	307	7	321	7	239	4	280	6	-6	11
Others	838	22	938	22	1,021	22	1118	20	979	21	33	--
South Africa												
Total	**2,633**	**100**	**3,014**	**100**	**3,417**	**100**	**3,712**	**100**	**3,194**	**100**	**41**	**--**
Durban	1.687	64	1,899	63	2,199	64	2,479	67	2,066	65	47	2
Cidade do Cabo	573	22	691	23	789	23	764	21	704	22	33	4
Port Elizabeth	314	12	370	12	393	12	423	11	375	12	35	8
Others	59	2.2	54	2	36	1	46	1	49	2	-22	--

A measure of IBSA Forum countries port system shortcomings is given by the *Global Competitiveness Report* (GCR) published by the World Economic Forum (Table X). With regard to the quality of its port infrastructure, at the last report, released in September 2009, Brazil held the 127th position out of 133 countries. India fell to the 90th position, while South Africa, the best placed among the three partners, was in the 49th place. It is worth noting that among these three countries, when considering the situation of all transportation modes, ports always appear worse off.

Table X – Global Competitiveness Report – IBSA - Quality of Infrastructure and of Transport – Countries Position ranking (World Economic Forum, 2008,2009 and 2010)

Infrastructure Quality	Brazil		India		South Africa	
	2008/2009	2009/2010	2008/2009	2009/2010	2008/2009	2009/2010
General(*)	110	106	87	89	40	40
Roads	110	106	87	89	40	40
Railroads	96	96	21	20	37	40
Ports	123	127	93	90	49	49
Airports	101	89	66	65	25	23
Countries	134	133	134	133	134	133

The sum of all these factors result in intra-IBSA transportation costs ranging from a minimum of about 9,0% of total imports value from India originated in South Africa, up to approximately 12,5% of total Indian imports from Brazil.

Legal Framework and Status of the Working Group on Maritime Transport

Maritime transport is in a priority agenda of the trilateral negotiations. The need to improve physical connectivity among IBSA members has been expressed on a recurring basis in both senior-level authorities and business meetings.

The first step consisted on developing a Trilateral Agreement on Merchant Shipping and Other Maritime Related Matters, signed in September 2006, during the First IBSA Summit. According to this agreement, cargo transport within IBSA is to be carried out based on free-access principles, meaning that IBSA Forum countries must extend equal treatment to their vessels and those of other partners in the following respects: tariffs, port charges, port access, freedom of entry, stay and departure from the port, use of port facilities and all other facilities.

A maritime transport Action Plan with a five-year horizon (Table XI) was signed at the third IBSA Summit in October 2008 and consists of eight projects which were designed to stimulate and facilitate the development of maritime relations among the three countries through greater cooperation among Governments, port authorities, learning institutions and navigation companies.

Table XI – IBAS: Transport Summary of the 2008-2013 Action Plan on Maritime Transport (MRE, 2008)

Project	Objective	Date	Relevant Stakeholders
Cooperation between shipping organizations and enterprises	• Establishment of IBSA Maritime Council to improve institutional mechanisms designed to foster the tripartite cooperation. • Increase the provision of regular maritime services among IBSA countries.	2008/ 2009	Governments and private enterprises of the member countries
Cooperation between Maritime Educational Institutions and Development of Human Resource Capacity	• Exchange of staff and students among Maritime Educational Institutions. • Create appropriate facilities for training staff specializing in maritime transport. • Develop a train-the-trainer programme to build a pool of trainers for IBSA countries. • Build a pool of Safety Auditors.	2010/ 2011	Maritime Educational Institutions and Governments
Exchange of data and information on the flow of goods in transit within IBSA and in ports	• Identification of the type and format of data to be exchanged on agreed intervals among the IBSA countries for the purpose of improving their statistical information system.	2009	Governments and Port Authorities
Cooperation between maritime administrations on maritime regulatory functions	• Foster an exchange of staff with the aim of increasing the number of registered institutions internationally capable of supervising ships and of handling other maritime issues. • Share best practices in models and methodologies for certifying ships, investigating maritime casualties and ensuring maritime safety.	2009/ 2010	Governments, Port Authorities and Regulatory Agencies
Cooperation in Ship Building and Repair	• Foster closer relations among ship builders and identify investment opportunities in ship building and repair with the aim of creating new commercial opportunities for this segment.	2009	Shipyards, Governments and Port Authorities
Cooperation in port development and Port Handling Technology	• Exchange information on plans for investing in ports and on best practices for port management. • Identify key opportunities for using new Port Operation Technologies. • Promote closer relations between public and private enterprises engaged in port management operations for the purpose of enhancing the efficiency of both port facilities and port operations.	2009/ 2010	Port Authorities, the Private Sector and Governments
Development of regional maritime hubs	• Developing a hub framework for transhipment operations within IBSA in each of its countries. • Improving port facilities for storing cargo to be traded within IBSA by establishing dry ports and introducing new port management approaches.	2009/ 2010	Governments, the Public and Private Sectors, Port Authorities and Port Operators
Cooperation in Techniques for Managing Invading Species	• Exchange experiences to reduce the risk of transit of invading species between IBSA countries.	2009/ 2010	Governments, the Public Sector, the Private Sector and Port Authorities

At the last Working Group on Matters of Transport meeting, held in July 2009, best practices in the port sector were discussed. Measures to strengthen relationship among the three countries in the international shipping subject, according with priorities and deadlines specified in the Plan of Action, were analyzed. For instance, both South African and Indian governments show a special interest in a deal with Brazil for seafarers training, since, compared to other members of IBSA, Brazil is significantly more advanced in formation of such labor.

CONCLUSIONS AND RECOMMENDATIONS

The transport issue becomes highly important when one considers the intra-IBSA trade flows. Large distances involved and imbalances observed in bilateral flows tend to put pressure on the costs of services being offered, in particular on those of maritime transport services. If the current trend toward a more intense trilateral trade continues, it will favour economies of scale in transport services. These economies of scale, together with other arrangements, will allow the establishment of long-term agreements between enterprises in foreign trade operations and maritime companies. This is the single factor with the greatest bearing on transport costs.

Therefore, in order to ensure better intra-IBSA connectivity, preserving the current trend of more intense trilateral trade is a key requirement. There must be continuous demand and increasing cargo movement to attract larger and better supply of transportation services. In this scenario, governments involved should focus their efforts on fostering trade integration by deepening tariff preferences and eliminating trade-related barriers and obstacles.

Specifically in relation to maritime transportation, the following additional suggestions should be considered:

A) Greater efficiency in port terminals of the three countries should be promoted for the purpose of reducing time for loading and unloading ships and, consequently, total trasit time.

B) At least one port should be established to be used as a hub in each IBSA country which would be fed by coasting navigation enterprises or feeder companies, interconnecting Argentina and Uruguay, for example, as a means to ensure the feasibility of an average occupancy leading to increased and more profitable international frequencies.

C) The coordination between international maritime companies and coasting navigation enterprises or feeder companies should be improved.

D) The main intra-IBSA cargo transhipment operations should be concentrated in a South African port. For this purpose, a cargo storage structure should be set up next to the selected port to concentrate cargo from Brazilian and Indian companies. The suggested port for this

purpose is that of Durban, since it already accounts for 60% of containerized cargo movement in South Africa.

Another important point is the adoption of trade facilitation measures, since losses faced by companies operating in foreign trade under IBSA bloc, because of port delays, lack of transparency and predictability. Bureaucratic and outdated customs procedures in force between the three partners, may be as significant as the rate costs. There is enough space for an intra-bloc progress in simplification and harmonization of customs procedures and licensing, especially with regard to sanitary and phytosanitary measures, payment, insurance and other financial requirements that are in force during movement of goods between Brazil, India and South Africa.

In addition, governments involved should, in partnership with other public and private agents, seek to reduce structural asymmetries in their maritime sectors. Such advances will ensure greater efficiency, transparency and predictability to trade, reducing, therefore, the cost of intra-bloc exports and imports.

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