1. Introduction
Brazil’s close ties with Africa date back many centuries, in fact almost 90 million of its 198 million population can claim African ancestry. These strong affiliations have stood the test of time – so that today, the Brazilian government’s Africa policy reaffirms these strong linkages through improved technical cooperation, trade and investment, and technology transfers. However, Africa represents more than just a partner for trade and investment; it offers Brazil a timely opportunity to expand its bilateral technical cooperation and to revolutionize renewable energy production – in particular, biofuels, where it has assumed a global leadership. Given its groundbreaking technical expertise in a range of areas relevant to Africa’s development needs (e.g. agricultural research, social protection, anti-retroviral treatments, etc.), Brazil can play an important role in contributing to the continent’s socioeconomic development.

The aim of this brief is to explore both the current nature and possible future orientations of Brazil’s economic, commercial, and financial relationships with the African continent. After this brief introduction, the paper focuses on three main objectives: (i) to assess the volume and trend of trade commodities between Brazil and African countries; (ii) to determine the nature of Brazilian investments in Africa; and (iii) to scope the benefits of Brazil’s technical cooperation. In this sense, the paper will unpack the economic potential that African nations can reap from engaging with one of the world’s rapidly emerging powers.

2. Commercial Ties between Brazil and Africa
The first term of President Luiz Inácio Lula da Silva, which began in 2002, shifted the focus of Brazil’s Africa policy on economics, trade and investments, as well as on agriculture, oil, mining, infrastructure, health, and science and technology. President Lula da Silva proved to be a staunch supporter of Africa, and during his last tour there was quick to voice Brazil’s “historic debt” to the continent. He made the aim of improving links with Africa a vital part of his policy, underscoring the importance of “South–South” relations. It is no surprise, therefore, that during his two terms of office, trade between Brazil and Africa expanded significantly, making Brazil an increasingly important partner for African exports. In fact, Brazil’s trade with Africa increased more than sixfold from 2000
to 2008, from US$ 4.2 billion to US$ 25.9 billion. Although the following year of 2009 witnessed a decrease in trade, with Africa down to US$ 17.1 billion, this was a reflection of wider market trends, and more specifically the negative effects of the global financial and economic crisis. The following year 2010 was marked by an upward trend in trade between Brazil and Africa, to US$ 20.0 billion. In terms of the ranking of Africa’s major trading partners, this currently puts Brazil in third place, behind China (US$ 107 billion) and India (US$ 32 billion), but ahead of Russia which trailed fourth, at US$ 3.5 billion.

Brazil’s major trading partners in Africa are Nigeria (32 percent), Angola (16 percent), Algeria (12 percent), South Africa (10 percent), and Libya (7 percent). Together these countries make up 77 percent of its total trade with the continent. However, because of its cultural and historical affiliations with African lusophone countries, Brazil’s trade relations with Mozambique, Guinea Bissau, Cape Verde, and São Tomé and Príncipe are more significant. The bulk of Brazil’s imports from Nigeria, Angola, and Algeria are of oil.
Brazil’s “Biofuels Revolution”

The 1973 oil crisis represented the beginning of Brazil’s strategic move toward ethanol fuel production in order to reduce its dependence on oil imports. After 30 years of continued state support in the biofuel program, based on agricultural technology for sugar-cane cultivation, Brazil has become the world’s second largest producer of ethanol, after the United States.

In 2008, Brazil produced around 28 billion liters of ethanol and exported more than 5 billion liters. Nigeria and Ghana imported respectively 97.8 and 19.7 million liters of ethanol from Brazil in 2008. Bioethanol production accounts for 40 percent of Brazil’s energy demand and close to 75 percent of all new cars in Brazil now run on a blend of biofuel and gasoline, hence contributing to the reduction of the country’s carbon emissions.

Brazil’s quest to position itself as the world’s leading producer and exporter of renewable energy has been a key commercial driver of its agricultural focus in Africa. Given the continent’s large potential for agricultural production (including sugar-cane), the Brazilian government has pledged to assist African countries to exploit the production and export opportunities of agriculture and biofuels, through trade, cooperation, technology, and skills transfer. As an example of agricultural technology transfer, Brazil’s agriculture research agency, EMBRAPA, opened an office in Accra, Ghana in 2008, with an emphasis on helping the country to develop its ethanol industry.

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Selected Biofuel Deals

Brazil-Mozambique: Two accords were signed in November 2009 for a US$ 6 billion investment in biofuel exploration in Mozambique.

Brazil-Angola:
A joint venture between Angola’s state oil company, Sonangol, and Brazilian construction company, Odebrecht, for a US$ 220 million project of sugar and ethanol production.

Brazil-Congo:
Two agreements signed in October 2007 to provide the Republic of Congo with training, technology and financing for the production of biofuels from sugar cane and palm oil.

Brazil-Nigeria:
Plans to build a ‘Biofuel Town’ in Nigeria were announced in 2007 and a proposed initial project of US$ 100 million for the production of Ethanol from sugar cane and palm oil was explored.

Agriculture

Brazilian investment in agriculture has increased considerably in a number of African countries. This is linked to the rising global food scarcity, the country’s growing demand for bioethanol, and its desire to lead the “biofuel revolution.” Agriculture has been a key contributor to the Brazilian economy as it accounts for about 7 percent of GDP and 35 percent of its exports, and employs close to 25 percent of the labor force (2009). Brazil’s prudent management and state investment in the sector has enabled the country to position itself as one of the world’s top food exporters.

Inspired by its success in agriculture and biofuels, Brazil has been assisting Africa to increase its food and energy security as well as to bolster its economic independence through trade and investment, cooperation, and technology sharing. In 2009, Africa imported 7.7 percent of Brazilian agricultural products. Although Brazil’s focus on Africa’s agriculture is driven by its strategic and commercial motives to become a leader in renewable energy, it is helping the continent to leverage its potential and trigger technical innovation by providing financial and technical assistance.

In this context, EMBRAPA, the Brazilian Enterprise for Agricultural Research, has been spreading Brazilian “know-how” and technology across Africa in several projects, ranging from assisting Senegal to develop its rice sector, to helping Tanzania with its dairy industry.
Furthermore, it is investing US$ 4.0 million in the formation of a cotton model farm in Mali. Another knowledge-sharing venture by Apex-Brazil (Brazilian Trade and Investment Promotion Agency) was the organization in June 2009 in Dakar, Senegal, of a Brazil Agri-Solutions Exhibition to showcase the country’s expertise in the areas of agriculture, biofuels, and processed food products.

Natural Resources and Infrastructure

There are a number of big Brazilian companies that have been heavily investing in Africa over the last few years. The three main players are: Petrobas, the state-controlled oil company; Vale (Companhia Vale do Rio Doce), the Brazilian mining company; and Odebrecht, the Brazilian giant construction company. These companies have carved out major roles for themselves in the fields of energy, mining, and infrastructure in lusophone African countries and more recently in West Africa, North Africa and South Africa, as detailed below.

In Africa, Petrobras has invested in several oil exploration projects (mainly offshore), in Nigeria, Angola, Libya, Namibia, and Tanzania. The company’s production in Africa (57,444 barrels of oil equivalent per day – boe/d) corresponds to 24 percent of its international production. Angola is the recipient of its fourth biggest international investment, worth US$ 900.0 million for the period 2009-2013. Investments planned for Nigeria are estimated at US$ 2.0 billion over the same period.

Vale, the world’s second largest company in metals and mining, has been involved in mining exploration (mostly iron ore and copper) in Angola, DRC, Gabon, Ghana, Guinea, Liberia, Mozambique, South Africa, and Zambia. To date, Vale has invested about US$ 2.5 billion in Africa, mostly in mining projects. The company is planning to scale up investment in Africa to US$ 15-20 billion over the period 2010-2015. The table below presents selected Vale investments in Africa.

Petrobras’s current Business Plan calls for total investments of US$174.4 billion between 2009 and 2013, out of which US$ 15.9 billion (9 percent) is earmarked for international activities. The newly approved Business Plan for the period 2010-2014 aims for total investments of US$ 224 billion, 5 percent of which (US$ 11.7 billion) will be allocated to international activities. The reduced share for overseas operations is due to increased investments in new projects of pre-salt exploration and production in Brazil.
Infrastructure firm Odebrecht operates in Angola, Ghana, Liberia, Libya, and Mozambique and has also completed projects in Botswana, Congo, Djibouti, Gabon, and South Africa. Its scope of activities is broad, including major infrastructure projects (roads, airports, mining/industrial plants, etc.), real estate ventures, and social projects (education, health, environmental issues, and cultural enrichment).

In 1984 Odebrecht established a presence in Angola, when it signed the contract to build the Capanda hydroelectric plant. It is currently employing more than 26,000 Angolans. The company also invests in diamonds, biofuels, and real estate (investments in housing and commercial developments reached US$ 606 million in 2008).

In Djibouti, Odebrecht was involved in the construction of the port (terminal at Doraleh), which was completed in 2009.

Vale in Africa: Selected Investments

<table>
<thead>
<tr>
<th>Country</th>
<th>Acquired Company Project</th>
<th>Status</th>
<th>Year</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozambique</td>
<td>Moatize Coal Project</td>
<td>Coal production and export with a nominal production capacity of 11 to 22-million tons per annum (Mtpa) of coal (metallurgical and thermal)</td>
<td>2011</td>
<td>4 billion</td>
</tr>
<tr>
<td>South Africa</td>
<td>Teal - copper company</td>
<td>50:50 joint venture</td>
<td>2009</td>
<td>65 million</td>
</tr>
<tr>
<td>Zambia</td>
<td>Konkola North Copper Project</td>
<td>Development works expected to start in 2013 for an estimated nominal production capacity of 44,000 tpy of copper in concentrate</td>
<td>2010</td>
<td>145 million</td>
</tr>
<tr>
<td>Guinea/Liberia</td>
<td>Simandou Iron Ore Project</td>
<td>Deposits of US$ 2.5 billion (paid for the development of the Simandou Project)</td>
<td>2010</td>
<td>5 billion (estimation)</td>
</tr>
</tbody>
</table>

2 The AfDB Board approved in September 2008 a US$ 80 million senior loan to the Doraleh container port project, from its private sector window.

Social Programs and Technical Cooperation

Brazil’s position as an important emerging market (ranked the 10th largest economy in the world) and one of the key players globally, has increasingly driven its desire for greater South–South cooperation. In Africa, Brazilian engagements are moving beyond commercial and broader geopolitical interests to embrace social development programs and knowledge transfer, particularly to the agricultural/biofuel sector. Brazil’s developmental engagement in Africa is also moving beyond lusophone countries and extending to Algeria, Benin, Botswana, Burkina Faso, Cameroon, Côte d’Ivoire, Gambia, Liberia, Mali, Morocco, Nigeria, Kenya, Senegal, Sierra Leone, South Africa, Togo, Tunisia, and Zambia.

In the health sector, Brazil has given US$ 21 million in aid toward construction of the continent’s first public factory for anti-retroviral (ARV) in Maputo, Mozambique, to help that country’s fight against AIDS. President Lula himself took a major part in initiating the project and plans to return for the factory’s inauguration in January 2011. Mozambique has more than 2.5 million people living with AIDS, nearly 12 percent of the population, but just 210,000 take ARVs, according to the Mozambican Health Ministry.

From 2004, the Brazilian Ministry of Social Development and Fight Against Hunger (MDS) was given the role to foster social inclusion and food security in Brazil, but also to promote opportunities for social development in developing countries.

“Social Programs and Technical Cooperation...”

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Through its numerous social sector initiatives (e.g. Zero Hunger Program, Bolsa Família program of conditional cash transfers etc.), Brazil was able to achieve a significant reduction in its national rate of poverty (31.4 percent decline between 2003 and 2006) by improving access to food, education, health and infrastructure services. Within the context of the Africa–Brazil Cooperation Program on Social Development, MDS experts have been providing technical assistance to African governments to design and implement social protection programs. For instance, in 2007, Brazil offered technical assistance to the government of Ghana to learn from the Brazilian experience in social policies and help design Ghana’s National Social Protection Strategy focusing on the Livelihood Empowerment Against Poverty (LEAP).
Brazil’s Cooperation Agency (ABC), which was created in 1987, coordinates Brazilian technical cooperation projects in the Global South through the provision of expertise, education and training, humanitarian relief, and concessional financial assistance. The scale of resources deployed in technical cooperation activities has almost tripled since 2006 to reach BRL 52 million in 2010 (about US$ 30.5 million), with Africa receiving 50 percent of ABC’s annual budget. This increasing share for Africa is due to the historical affiliation of Brazilian development assistance to lusophone countries. However, a wave of technical cooperation projects is being negotiated with new partners, including Benin, Botswana, Burkina Faso, Chad, Kenya, Mali, Morocco, Namibia, Nigeria, Senegal, and Zambia.

The number of Brazil’s technical cooperation agreements increased to 413 in 2009, from only 23 in 2003.

The following figure portrays the significant scaling up of its technical cooperation activities in developing countries.

Brazil’s development assistance to the developing countries has been expanding over the past few years. It is estimated that Brazilian aid has reached US$ 1 billion annually (there is no official figure for its aggregate ODA), with technical cooperation accounting for about 50 percent (US$ 480 million). Brazil provides technical assistance (transfer of knowledge, technologies and skills to promote development) mostly in agriculture, health and education (which together account for 50 percent of its technical cooperation), and mainly to fragile and conflict-affected countries and resource-rich countries (lusophone countries being the major recipients). The country also provides concessional loans and debt relief to developing countries. Given Brazil’s policy experiences, the quality of its technology and expertise, and the absence of aid conditionality, its aid program holds significant appeal for developing countries.

Source: Brazilian Cooperation Agency (ABC)
The following table presents a sample of cooperation activities in Africa:

**Brazilian Technical Cooperation in Africa: Selected Projects**

<table>
<thead>
<tr>
<th>Host Country</th>
<th>Sector</th>
<th>Project</th>
<th>Objective</th>
<th>Year</th>
<th>Company/Ministry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>Education</td>
<td>School for All</td>
<td>Enhance the inclusion of students with special educational needs in the Angola educational system</td>
<td>2008</td>
<td>Ministry of Education</td>
</tr>
<tr>
<td>Algeria</td>
<td>Health</td>
<td>Technical Capacity Building in Pediatric Cardiac Surgery</td>
<td>Train Algerian specialists in pediatric cardiac surgery</td>
<td>2008</td>
<td>National Institute of Cardiology</td>
</tr>
<tr>
<td>Ghana</td>
<td>Agriculture</td>
<td>Developing the bases for the establishment of energy agriculture</td>
<td>Promote the development of biofuel crop production as important alternative energy source</td>
<td>2008</td>
<td>EMBRAPA</td>
</tr>
<tr>
<td>Morocco</td>
<td>Infrastructure</td>
<td>Strengthening the capacity of trainers in the field of civil construction</td>
<td>Assist in strengthening the capacity of trainers in the Construction and Public Works (BTP) sector</td>
<td>2008</td>
<td>National Service of Industrial Apprenticeship - SENAI</td>
</tr>
</tbody>
</table>

*Source: Brazilian Cooperation Agency (ABC)*
4. A Platform for Knowledge Sharing

In the context of knowledge sharing and technology transfers with developing countries, the ABC and other Brazilian institutions have been diffusing Brazilian expertise and know-how in various areas through technical assistance projects, dialogue and knowledge forums, and research networks, as elaborated below.

**IBSA Dialogue Forum and Biofuel Technology Transfer:** The tripartite India–Brazil–South Africa (IBSA) Dialogue Forum was launched in June 2003 with the aim of increasing cooperation in key areas such as trade, energy, agriculture, and culture, among others. The IBSA has 17 working groups, with government representation, which regularly exchange knowledge and experiences in key issues of relevance to developing countries. For instance, the working group on Science and Technology, which leads the way with joint initiatives, has been sharing technology on biofuels. Within that realm, Brazil and South Africa have been exploring cooperation and knowledge-sharing mechanisms to learn from Brazil’s expertise and technology in bioethanol development.

**Africa–Brazil Agriculture Innovative Marketplace:** This initiative, which was launched during the Brazil–Africa Dialogue on Food Security, Fighting Hunger and Rural Development (May 10-12, 2010 in Brasília City, Brazil), aims to benefit smallholder producers by enabling innovation through collaborative partnerships between Africa and Brazil.

The Marketplace brings together African and Brazilian researchers to work jointly on projects to enhance Africa’s agriculture innovation, including rehabilitation of pastures, natural resources management, and the production of clean energy. This initiative will promote knowledge exchange between Africa and Brazil as well as investments in agricultural research and development.

**Africa–Brazil Health Research Network:** A new network was set up in May 2010 to share research and experience on neglected tropical diseases, toward developing a framework for collaboration between researchers and institutions in Africa and Brazil. It will initially focus on Angola, Brazil, Ghana, Mozambique, and Nigeria, and target small- to medium-sized collaborative projects with the aim of later expanding membership and developing large-scale projects for international funding.
5. Conclusion

Brazil’s increasing trade and investment activities in Africa, during recent years, present significant opportunities for African countries’ socioeconomic development. Their approach stresses partnership as well as profit, empowering local people to build a more stable future, and using the local population to work on projects, as opposed to Chinese companies who often bring in their own teams of Chinese workers.

Over the last decade, Brazil has been running a trade deficit with Africa, which increased from US$ 1.6 billion in 2000 to US$ 5.6 billion in 2008, due largely to rising oil imports. Brazil’s increasing import of African commodities was accompanied by technical assistance provided to African countries in agribusiness (e.g. biofuels and pharmaceutical products) and social sectors.

Brazil’s efforts to increase FDI and aid to African countries are noteworthy. Following President Lula’s strong diplomatic engagements with the continent, many Brazilian firms have been investing heavily in the mining sectors, agriculture, and infrastructure in Africa. Similarly, its technical cooperation and development assistance are broadening to cover a wider range of areas and extending beyond the African lusophone countries.

Moreover, its ties go beyond commercial trade to include social programs and alliances with African countries. The current President of Brazil, Dilma Rousseff, took office on January 1, 2011 and is expected to continue President Lula’s foreign policy and strong trade links with Africa.

The growing interactions between Brazil and Africa and the opportunity to help African economies diversify and modernize should be seized by development institutions such as the African Development Bank (AfDB). The Brazil’s commitment to South–South cooperation and earnest support for Africa’s development presents an opportunity for the Bank to strengthen its ties with Brazil by mobilizing investments in areas such as bio-energy and infrastructure, and by promoting technology transfers and knowledge sharing across the continent to scale up sustainable future economic growth.