



## BRAZIL – has the land of the future arrived?

### Introduction

Jim O'Neill, an economist working for the investment bank Goldman Sachs coined the term BRIC in his 2001 report, "The World Needs Better Economic BRICs". BRIC stands for Brazil, Russia, India and China. He grouped these countries together because they are undergoing similar rates of rapid economic growth. Furthermore, their size (collectively 25% of the world's land area and 40% of its population) means that this growth, if continued, is predicted to make their combined economies larger than the combined economies of the current richest countries of the world by 2050. This Factsheet will explore the geography behind the Brazil's inclusion in the BRIC. It will also ask whether this economic growth will enable Brazil to acquire the characteristics of superpower.

Figure 1: Brazil Fact File

<b>Full name:</b> Federative Republic of Brazil
<b>Population:</b> 195.4 million (UN, 2010)
<b>Capital:</b> Brasilia
<b>Largest city:</b> Sao Paulo - population 11,057,629 (Instituto Brasileiro de Geografia e Estatística)
<b>Area:</b> 8.55 million sq km (3.3 million sq miles)
<b>Major language:</b> Portuguese
<b>Major religion:</b> Christianity
<b>Life expectancy:</b> 70 years (men), 77 years (women) (UN)
<b>Main exports:</b> Manufactured goods, iron ore, coffee, oranges, other agricultural produce
GNI per capita: US \$8,040 (World Bank, 2009)

### The BRIC prediction

The prediction made by Jim O'Neill for the BRICs is straight-forward. All four countries have undergone **political reforms** in the last 3 decades to embrace global capitalism. As a result, China and India are predicted to become the dominant **global suppliers of manufactured goods and services**. Brazil and Russia will become similarly dominant as **suppliers of raw materials**. Of the BRIC, Brazil is the only nation that has the capacity to develop manufacturing, services, and resource supply simultaneously. The development of all four countries benefits to varying degrees from **technology transfer** from the world's core economic regions (USA, EU and Japan).

### How well does Brazil fit this prediction?

#### Political reform

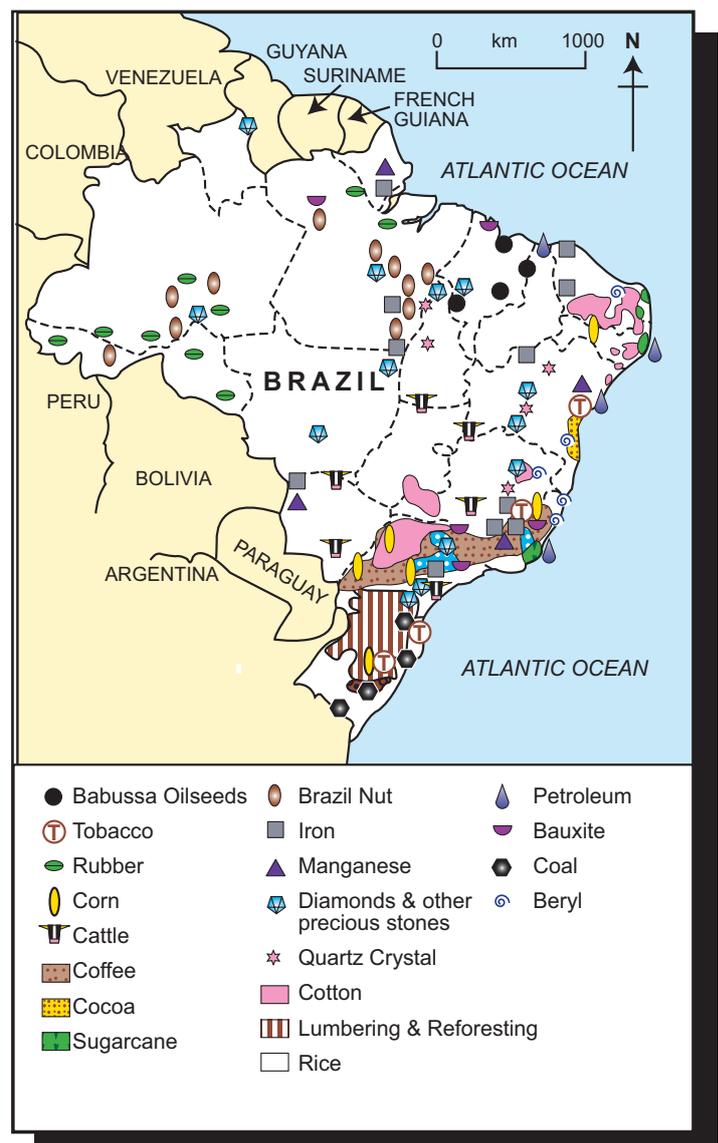
Brazil experienced rapid economic growth after the Second World War, but was also caught up in the wider political instability of South America. A coup in 1964 led to a military government, which only came to an end in 1985. The ruling Generals laid the foundations for Brazil's current democracy. The early years of democracy were troubled by Brazil's old problems of economic crisis and unusually high inflation. This limited economic growth and led to significant inequality within the country.

The reestablishment of democracy in 1985 was the first key political reform to help stabilise Brazil. Underlying economic instability was addressed by the Real Plan in 1993. This worked to bring the country's persistent hyperinflation under control. Taxes were raised to reassure international investors that Brazil would be able to repay its debts in future and foreign-currency debt was repaid.

This sound economic basis was built upon by President Lula Da Silva (2002-2010). He set out to include poor and working-class Brazilians in the country's revival. His government introduced big rises in the minimum wage and pensions. The Bolsa Familia programme gives 12m families small but life-changing amounts of cash in return for having their children vaccinated and keeping them in school. His government also rapidly expanded universities and technical schools.

These political reforms have made Brazil attractive to foreign direct investment. It is now politically and economically stable. Moreover, social reforms have boosted domestic demand. Since 2003 some 20m Brazilians have emerged from poverty and joined the market economy. These new consumers buy everything from cars to cookers and fridges to flights. To this burgeoning domestic market, add China's appetite for Brazilian iron ore, meat, soya. These reforms are the foundation for putting the B in BRIC.

Figure 2: Map of Brazil showing main economic geography



However, Brazil hasn't changed overnight. Complex tax systems and accusations of corruption and political favouritism cause some to question Brazil's ability to manage its growth sustainably. For example, almost a quarter of senior managers in the federal administration are also members of the governing Worker's Party. The previous President, Lula Da Silva, told the Economist magazine in 2010 of the difficulties of getting things done.

*“A big infrastructure project—and Brazil needs many, from roads, ports and airports to sewage works and power plants—could easily take five years to solve all the problems, and two years to get the job done.”*

On a positive note, Brazil's October 2010 elections passed off peacefully, with the country's first female President being elected: Dilma Rousseff. She leads the Worker's Party and has promised to continue the successful economic and social policies of her predecessor.

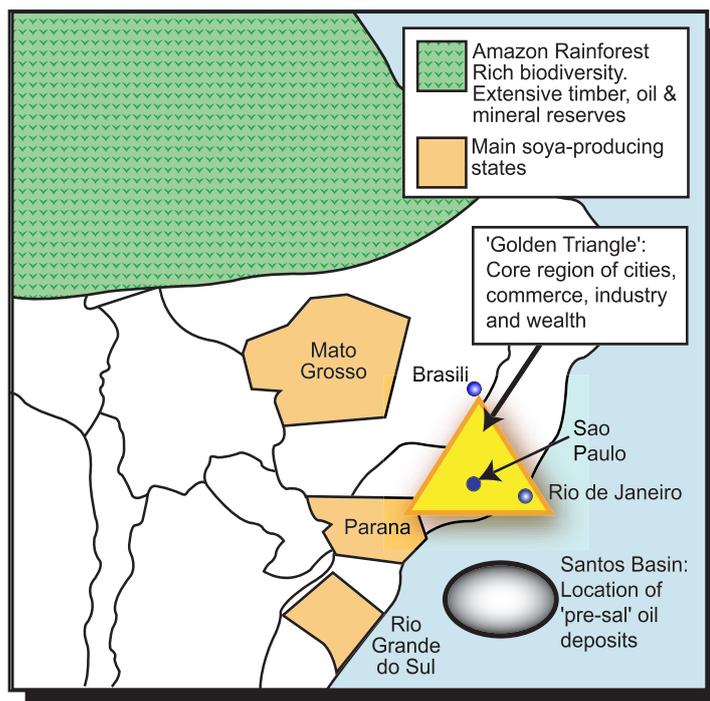
**Figure 3: Dilma Rousseff, President of Brazil.**



**Raw Materials**

Brazil is the fifth largest country in the world. It has eight major drainage basins, providing huge hydro-electric power potential. At least 70 dams are planned for the Amazon region alone, including the controversial Belo Monte hydroelectric dam.

**Figure 4: Map of Brazil showing main raw materials.**



Huge deep-sea oil reserves (known as pré-sal, since they lie beneath a volatile layer of salt) were discovered a few years ago. If these can be brought to the surface and to shore they will turn Brazil into an oil power.

Traditional primary industries such as agriculture and allied sectors like forestry, logging and fishing are a very important part of Brazil's growth story. These sectors accounted for 5.1% of the gross domestic product in 2007. This is in spite of trade barriers adopted by developed countries. Price rises in commodities such as beef and soybeans since 2007 have further magnified the positive influence of these exports for Brazil's balance of trade.

**Case Study: Soybean – a globalised commodity growth story**

*Government support for soybean production began with the 1960s policy of making free tracts of government land available in the centre-west of Brazil. The native fertility of local cerrado soils is extremely low. Agricultural technology transfer in the late 1980s made widespread agricultural production viable. The soil must be limed, fertilized and treated with micronutrients. Many trade barriers were reduced or eliminated in the 1990s. In 1996, the export taxes on soy beans, soy meal and soy oil were removed. Two thirds of Brazilian soybean is genetically modified and the industry continues to invest in efficient machinery and technology.*

*Brazil produced 67.5 million metric tonnes (MMT) from a planted area of 23.2 million hectares in 2010. Soybean exports from Brazil stood at estimated 28.5 MMT, more than 40% of its soybean production. In 1988 Brazil only produced 18 MMT. Brazil is the second largest exporter of soybean behind the USA. China imports more than half of the Brazilian soybean exports. The EU, Thailand, Japan, Taiwan, South Korea, Norway, Egypt, Saudi Arabia, Morocco, Bangladesh and Iran are the other major buyers of Brazilian soybean.*

*Soybean is in high demand due to its domestic, agricultural and industrial uses. A short list would include: meat replacement (tofu), dairy replacement (soy milk and cheese), biofuel, cattle feed, candles, soap, cooking oil, flour; cosmetics, clothing, resins, plastics, inks and insulation. As a result it has seen a steadily rising price. US\$300 per MMT in 2000 to US\$1130 per MMT in 2010. The price peaked in June 2008 at US\$1450 per MMT.*

*In the future, a 500 percent increase in Brazil cropland acres is possible. The additional land could be developed by clearing new land and by converting pastureland. Soybean acres in Brazil could at least triple.*

**Manufacturing and Service Industries**

It is important to remember that Brazil is much more than a supplier of raw materials. Major export products include aircraft, electrical equipment, automobiles, ethanol, textiles, footwear, iron ore, steel, coffee, orange juice, soybeans and corned beef.

Industry - from automobiles, steel and petrochemicals to computers, aircraft, and consumer durables - accounted for 30.8% of gross domestic product in 2008. Such industries, which are often technologically advanced, are highly concentrated in metropolitan São Paulo, Rio de Janeiro, Campinas, Porto Alegre, and Belo Horizonte.

**Technology**

Brazil's growth therefore is built on high value added exports, not just basic commodities. Technology transfer from core economies to Brazil is important to support future growth.

For example, in 2010 The Brazilian government and the United States resolved a longstanding dispute over US cotton subsidies by opting for US cotton research technology transfer to Brazil, instead of Brazil retaliating to the tune of some US\$ 830 million.

Moreover, technology transfer is built into Brazil's National Defence Strategy. Brazil won't buy foreign arms unless it receives new technologies for its military and to enhance the products of its civilian companies. A good example of this is Brazil's current plan to buy 36 fighter aircraft.

The competition pits U.S. company Boeing against Sweden's Saab and France's Dassault. Brazil's Defence Minister Nelson Jobim has said that,

*"The program has a basic requirement: technology transfer from the winner company."*

This process is adding to an existing science base. Brazil's most notable technological hubs are the Oswaldo Cruz Institute, the Butantan Institute, the Air Force's Aerospace Technical Centre and the Brazilian Agricultural Research Corporation. The Brazilian Space Agency has the most advanced space program in Latin America, with significant capabilities in launch vehicles, launch sites and satellite manufacturing.

### Case Study: Embraer - a high-tech Brazilian Trans-National Corporation

Created on August 19<sup>th</sup> 1969 Embraer - Empresa Brasileira de Aeronáutica - is a good example of a Brazilian high-tech manufacturing company. Such companies help explain Brazil's growth potential. The company is involved in the design, development and manufacture of aircraft. It also sells and provides after-sale support for aircraft for commercial aviation, executive aviation, defence systems and agricultural aviation. It has produced more than 5,000 aircraft that operate in 92 countries on five continents, and it is the market leader for commercial jets with up to 120 seats.

Moreover, Embraer is a TNC. It has over 17,000 employees based in Brazil, USA, France, Portugal, Singapore and China. Design, production and sales are therefore located in the three most important aviation markets: North America, EU and emerging Asian economies. This company also demonstrates the investment Brazil is making in new technologies. Embraer has established a technological development plan that is developing solutions for aircraft design, development and production for the future. For example, it has a world leading virtual reality design facility at its base in Sao Jose dos Campos in Brazil.

The company made a net profit in 2010 of \$330.2 million. Its total revenue for 2010 was \$5.4 billion. This was a record year in its executive aviation business, delivering a total of 144 aircraft.

Figure 5: Embraer Lineage 1000 Corporate Jet.



### Does this growth make Brazil an emerging superpower?

Power can be mapped using quantifiable evidence. The patterns and relationships shown reveal concentrations of power that can be termed superpower. A superpower is a state with a leading position in the international system and the ability to influence events and its own interests and project power on a worldwide scale to protect those interests. An emerging superpower has some of these characteristics, but there remain limitations to its ability to influence and control other countries worldwide. There are four types of power that can be measured to help us make judgements about Brazil's rise.

### 1. Economic Power

The economic power of a country can be measured simply as Gross Domestic Product: the total amount of goods and services produced annually. It is also possible to measure the total number and size of the Transnational Corporations domiciled in a country. The global networks constructed by these TNCs are the sinews of economic power. Therefore, it is also necessary to measure Gross National Income to take account of the revenues accruing to a country from its investments abroad. Other measures of economic power include the total stock of global currency reserves and the total stock of other financial assets such as government and commercial bonds and bank deposits held by a country.

Brazil is currently the world's 8<sup>th</sup> largest economy with the GDP of just over US\$2 trillion in 2010. But with a current growth rate of 9% and an average growth rate of 5% over the past decade Brazil is predicted to become the world's 5<sup>th</sup> largest economy by 2050. Its largest company, Petrobras, an oil and gas producer, came 18<sup>th</sup> in the Forbes Global 2000 list of the world's largest companies in 2010. It has 4 other TNCs in the top 100. Clearly, Brazil is gaining global economic influence.

### 2. Military Power

Military power can, in theory, be measured and mapped; the number of troops, tanks, war planes, capital ships such as aircraft carriers etc. However, as much of this information is confidential this proxy measure often relies on broad brush statistics. The most potent form of military power is nuclear power and intercontinental ballistic missiles. This links to space programmes. Further measures of military power include spy technology, unmanned drones and cyber warfare capability.

Brazil is the largest military power in South America. An army of more than 250,000 soldiers, 700 war planes and the only South American navy with an aircraft carrier makes Brazil a formidable regional power. It doesn't have the capacity to project military power outside of its region and cannot be considered a military superpower.

### 3. Cultural Power

Cultural power is also called 'soft power'. The term was coined by American academic Joseph Nye in 2004. It is the ability to obtain what one wants through co-option and attraction. It can be contrasted with 'hard power', that is the use of coercion and payment. Soft power can be wielded not just by states, but by all actors in international politics, such as NGOs or international institutions. It is the hardest of all four proxy measures of power to quantify.

The culture of Brazil is derived from its Portuguese colonial heritage, but is also heavily influenced by African and non-Portuguese European migrations. Brazilian music styles such as samba and Bossa Nova are globally significant. Football is an iconic national export. It hosted the 1992 UN Earth Summit, which led to the Kyoto Agreement. Brazil is due to host the 2016 Olympic Games in Rio de Janeiro – the first to be held in South America as well as the 2014 World Cup. The cultural exports are limited however in comparison with the scale of Hollywood, the reach of English as a global lingua franca and the size of Asian populations.

### 4. Geographical Power

Geographical power is the physical or cultural presence in a specific place, which results in influence over that place. It can be measured by counting and locating military bases abroad, recording the 'sphere of influence' that countries perceive themselves to have and studying the distribution of language areas, currency zones and cultural links. It is also connected to networks of expatriate communities abroad.

Brazil is a founding member of the United Nations, the G20, the Latin Union, the Organization of Ibero-American States, Mercosul and the Union of South American Nations. The Brazilian Constitution also determines that the country shall seek the economic, political, social and cultural integration of the nations of Latin America. Therefore, it does have significant geographical influence in its region, but much less so worldwide.

**Figure 6: How powerful is Brazil compared to the other BRIC? (Economist, 2008)**

Global Rank Order	Brazil	Russia	India	China
Area	5 <sup>th</sup>	1 <sup>st</sup>	7 <sup>th</sup>	3 <sup>rd</sup>
Population	5 <sup>th</sup>	9 <sup>th</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
Labour force	5 <sup>th</sup>	7 <sup>th</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
GDP	8 <sup>th</sup>	12 <sup>th</sup>	11 <sup>th</sup>	3 <sup>rd</sup>
GDP per capita	60 <sup>th</sup>	59 <sup>th</sup>	139 <sup>th</sup>	98 <sup>th</sup>
Human Development Index	75 <sup>th</sup>	71 <sup>st</sup>	134 <sup>th</sup>	92 <sup>nd</sup>
Exports	23 <sup>rd</sup>	12 <sup>th</sup>	18 <sup>th</sup>	1 <sup>st</sup>
Imports	24 <sup>th</sup>	14 <sup>th</sup>	15 <sup>th</sup>	2 <sup>nd</sup>
Received FDI	11 <sup>th</sup>	12 <sup>th</sup>	29 <sup>th</sup>	5 <sup>th</sup>
Foreign exchange reserves	7 <sup>th</sup>	3 <sup>rd</sup>	5 <sup>th</sup>	1 <sup>st</sup>
Electricity consumption	9 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	2 <sup>nd</sup>
Number of mobile phones	5 <sup>th</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
Number of internet users	5 <sup>th</sup>	8 <sup>th</sup>	4 <sup>th</sup>	1 <sup>st</sup>
Motor vehicle production	6 <sup>th</sup>	19 <sup>th</sup>	7 <sup>th</sup>	1 <sup>st</sup>
Military expenditures	12 <sup>th</sup>	5 <sup>th</sup>	10 <sup>th</sup>	2 <sup>nd</sup>
Active troops	14 <sup>th</sup>	5 <sup>th</sup>	3 <sup>rd</sup>	1 <sup>st</sup>
Rail network	10 <sup>th</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
Road network	4 <sup>th</sup>	8 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>

### Summary

Clearly there are sound geographical reasons for including Brazil in the BRIC. Brazil's political reforms technology transfer and foreign direct investment are enabling the country to grow rapidly as part of a globalising world. However, Brazil's power can only be understood in the wider context of the global distribution of power. As south-south development accelerates Brazil will become an increasingly significant economic power, but will remain a regional military and geographical power. Its iconic music and sport, as showcased by the 2014 World Cup and the 2016 Olympic Games suggest it may develop significant cultural influence.

### Activities

1. Read the international, business and cultural news sections of a broadsheet Sunday newspaper. Draw up an inventory of any stories about Brazil. Categorise them under the headings economic, military, cultural and geographical.
2. With reference to named examples and your own knowledge, explain why Brazil is regarded as an emerging superpower. (Tip: Use the categories of power to provide your answer with some structure.)

### Further Reading

- The portal of the Federative Government of Brazil: [www.brasil.gov.br](http://www.brasil.gov.br)
- Embraer company website: [www.embraer.com](http://www.embraer.com)
- Information on agriculture in Mato Grosso, Brazil: [www.brazilintl.com/states/matogrosso/matogrosso.htm](http://www.brazilintl.com/states/matogrosso/matogrosso.htm)

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