

*Brazilian Innovation Takes a Leap Forward*



Brazil is quickly transforming its image. From what was once a sleepy colony to its tumultuous experimentation with bureaucratic-authoritarian regimes, has now thrived into what is today the eighth largest economy and is projected to become the fourth largest by 2040. Driven in part by the enormous appetite for commodity goods by China and India, Brazil owes much of its current economic and social success to political will and growing domestic demand.

Recently, Brazil has become a stalwart example for innovative businesses and self-sufficiency. Home to some of the world's largest companies, with the likes of Vale, who produce iron ore, AB InBev, who recently bought out Anheuser-Busch, and oil giant Petrobras. These titans of industry have become the face of a Brazil that is expanding its political and economical footprint across the globe. Brazil is now the lead [exporter](#) of poultry, sugar cane, and ethanol, with agriculture making Brazil a breadbasket for the world, with agricultural expanding 365 percent between 1996 and 2006, quite the turn around for a country that was a net-importer of food thirty years ago. The explosion of farming is largely due Embrapa, the Brazilian Agricultural Research Corporation, who have transformed unfit *cerrado* (savannah) into thriving farmlands, due mostly to innovative technology and long-term development initiatives.

Self-sufficiency in energy and consumer goods has been a focal point in Brazil's progression into a world power. The vast oil discoveries in the Santos basin add to the already growing resume of Brazilian self-sufficiency, with Petrobras already leading the way in world [deep-sea](#) drilling. Mastering ethanol production for commercial use in the 1980s as response to the oil crisis, Brazil car manufacturing enjoys the use of "flex"

engines, in which a single, or combination, of ethanol or standard fuel can be used. In the month of October 2010, 89 percent of new cars sold in the country featured flex engines. Because of its popularity and easy access, Brazilian sugarcane-based ethanol is six times more efficient than corn-based ethanol produced in the United States, due to the use of genetically modified sugarcane.

Embraer, the third largest aircraft manufacturer behind Airbus and Boeing, has thrived because of their ability not to out-compete or out-sell their respective rivals, but because they were able to find a niche within the industry of small/medium-sized planes. Embraer's innovative business model of "[reverse outsourcing](#)" has become standard within the aviation industry. They have succeeded ever since, a telling story of accomplishment considering their near collapse in the 1990s.

While these companies have taken the lead in innovative business plans and technologies, [statistics](#) tell otherwise. The Global Innovation Index placed Brazil 68th in 2010, an eighteen point drop from the previous year. In 2009, China filed for over 8,000 international patents, Brazil only filed for 480. Worst yet is the lack of government funding, where only 1.1 percent of GDP is spent on Research and Development, compared to 3.4 percent by Japan.

Critics point to the burgeoning inequality and education gaps as a reason for Brazil's relative catch-up in its quest for the coveted stamp of developed nation. Both the Fernando Henrique Cardoso and Lula administrations have implemented successful conditional cash transfer programs to boost school enrollment which have lifted an entire tier of poverty stricken people into a new lower-middle class, which is seeing a boom in consumer spending. With further investment in education, progression in innovation will follow.

Regardless of statistics and rankings, Brazil has become an example of green-technology and development. Successfully securing the 2014 World Cup and 2016 Summer Olympics is not only an enormous opportunity to bolster foreign investment and attract new business, but a nod to Brazil's growing stature. As Empraba or Embraer shows, innovation has become standard within Brazilian companies, and an example for the world to follow.

Posted by: Michael Darden, Program Assistant, Brazil Institute

*Sources: The Economist, O Estado de S. Paulo, Engineering and Technology Magazine*

*Photo credit: "[Sugarcane Ethanol](#)" courtesy of flickr user [Sweeter Alternative](#)*