



# Cyber Security Export Market: Brazil

## 2014

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**George Mason University (School of Public Policy)**

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# EXECUTIVE SUMMARY

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- » Brazil is one of the largest markets in the world. It was the 11<sup>th</sup> largest defense spender in 2012<sup>1</sup> and the defense budget for 2013 was \$37 billion<sup>2</sup>. Brazil is the seventh largest online market in the world.<sup>3</sup>
- » Room for growth remains in the Brazilian cyber security market. Defense spending is less than 2 percent of GDP.<sup>4</sup> 49.8 percent of Brazilians were using the internet in 2012.<sup>5</sup> Brazil's military modernization program includes plans for investment in advanced technology and cyber security.
- » Current developments are increasing Brazil's reliance on technology and demand for cyber security.
  - Military modernization.
  - World Cup 2014 and Summer Olympics 2016 will be hosted in Brazil.
  - Allegations that the NSA accessed communications of the President of Brazil and other government officials.
  - The government announced in October 2013 that a secure email service would be created.<sup>6</sup>
  - Government websites attacked.
  - Brazil ranked as the second largest source of cyberattacks.<sup>7</sup>
- » The potential in the Brazilian cyber security market is great, but as when entering any new market there are challenges that must be addressed.
- » Brazil was ranked 116<sup>th</sup> out of 189 countries for ease of doing business by the World Bank.<sup>8</sup>
- » Trusted Brazilian partners are critical to meeting requirements of the Buy Brazil Act and Law to Promote the Industrial Base of Defense.

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<sup>1</sup> (SIPRI, 2013)

<sup>2</sup> (export.gov, 2013)

<sup>3</sup> (European Travel Commission, 2012)

<sup>4</sup> (CIA World Factbook, 2013)

<sup>5</sup> (The World Bank, 2013)

<sup>6</sup> (BBC, 2013)

<sup>7</sup> (Barrett, Larry, 2010)

<sup>8</sup> (IFC and World Bank, 2013)

# CYBER SECURITY MARKET

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The Brazilian cyber security market is important because of the rate of connectivity of individuals and the government, the planned modernization of the military, anticipated economic growth and the lack of sufficient domestic capability to deliver the required hardware, software and services.

The *White Paper to Guide Future Defense Priorities* was adopted by Brazil in 2012. The Paper outlines cyber defense actions planned for the near term including the development of Brazil's Cyber Defense Center (CDCiber).<sup>9</sup> The Cyber Defense Project is led by the Army and is expected to invest \$420 million through 2031. Additional spending is expected from other branches of the military.<sup>10</sup>

CDCiber, was set up in 2012 as a division of the Army and was planned to be staffed with 140 people. The only declared purpose was defense (not offensive cyber war). CDCiber is responsible for the networks to be used for major upcoming events, the 2014 World Cup and 2016 Olympics. Serpro, the government's in-house IT unit will build the networks with support from contractors.<sup>11</sup>

When CDCiber was established within the Ministry of Defense, the [Department of Information and Communication Security \(DSIC\)](#) under the [Cabinet of Institutional Security \(GSI\)](#) was already a part of the office of the Presidency. DSIC had published the Green Book on Brazil's Cyber Security with the intention of fostering dialogue between state and non-state actors.<sup>12</sup> The Green Book has a set of principles on how the country's networks should be governed.<sup>13</sup> Even with departments that have been established to address cyber security, Brazil "is still in diapers" in terms of cyber-security, Brazilian Defense Minister Celso Amorim told Congress.<sup>14</sup>

## CYBER ATTACKS

Suspected cyber-attacks in recent years have helped to spur the cyber security initiatives of the government. Much of the push to pass cyber security legislation or to allocate funds to cyber security seems to come shortly after an attack, or presumed attack, is reported in the news. The attacks that have received media attention have been on critical infrastructure, government websites, and various businesses.

There have been a series of blackouts in Brazil that some have attributed to cyber-attacks. "President Obama didn't say which country had been plunged into darkness, but a half a dozen sources in the military, intelligence, and private security communities have told us the president was referring to Brazil."<sup>15</sup> There were blackouts in 2005 and 2007 that each affected multiple cities and tens of thousands of people that were attributed to cyber-attacks.

"The service interruption of government websites and the disclosure of the supposedly personal data of top-ranking politicians claimed" in 2011 was claimed by "hacking collective [LulzSec](#)" and was "considered the largest cyber offensive in Brazilian history".<sup>16</sup> The website of the state-own oil company Petrobras was also targeted in the attack.

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<sup>9</sup> (UMass, 2013)

<sup>10</sup> (UMass, 2013)

<sup>11</sup> (Linha Defensiva, 2012)

<sup>12</sup> (UMass, 2013)

<sup>13</sup> (Linha Defensiva, 2012)

<sup>14</sup> (Frayssinet, Fabiana, 2013)

<sup>15</sup> (CBSNews, 2010)

<sup>16</sup> (IT Decisions, 2013)

In 2011, in an article unrelated to these particular government website outages, it said that Brazil registered 2,000 hacking attempts per hour against government websites.<sup>17</sup>

## ALLEGATIONS OF NSA TARGETING BRAZILIAN ENTITIES

As the Wall Street Journal reported, “The NSA leaks have sparked protests from all over the world; the reaction in Brazil has been especially strong. It has been fueled by a steady stream of news reports on Brazil’s main news network, Globo TV. The stories, which include allegations of spying on Rousseff and Petrobras, have been supplied to the news agency by Glenn Greenwald, the Guardian reporter who first exposed the Snowden documents and who lives in Rio de Janeiro.”<sup>18</sup>

As Brazil has at times been ranked second<sup>19</sup> only to Russia as the source of cyber-attacks, the need for cyber security comes from both domestic and international threats. The vulnerability of critical infrastructure, government applications, and commercial entities has been demonstrated by past attacks. Regardless of whether the motivation is political or purely criminal, as Brazil becomes more dependent on advanced technology the need for cyber security becomes more apparent.

The country’s reliance on technology, the recent attacks, and the government’s planned spending make it clear that there is a sizable cyber security market in Brazil. Further, though the current market is significant, there is plenty of room left for growth. With current defense spending at less than 2 percent of GDP and internet usage at less than 50 percent of the population, the goal of military modernization and expected economic growth should facilitate raising these numbers. The challenge for new entrants will be in determining how best to access that market.

# MARKET ACCESS

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Brazil has made progress in opening its borders and reducing barriers to trade that were the norm in the past. Those barriers were both tariff barriers and non-tariff barriers, including licensing requirements.<sup>20</sup> According to the US Commercial Service, Brazilian barriers to trade remain a concern to the US Government.<sup>21</sup> At the same time, foreign companies can benefit from industry tax incentives for goods that are not available in the domestic market. These import duty reductions approved by the government may be relevant to the cyber security market, because the government aims to promote the import of capital goods and of technology that are deemed capable of helping to modernize the Brazilian industrial sector.<sup>22</sup>

## TRADE AGREEMENTS

Despite remaining barriers to trade, Brazil is engaged in a number of trade agreements. In 2011, the US President Obama and Brazilian President Rousseff signed the [Agreement on Trade and Economic Cooperation](#). The purpose of the agreement is to increase cooperation on trade and investment and other issues in which the countries have a shared interest, including innovation, trade facilitation, and

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<sup>17</sup> (Estrada, Isabel, 2011)

<sup>18</sup> (Chao, Loretta, 2013)

<sup>19</sup> (Barrett, Larry, 2010)

<sup>20</sup> (export.gov, 2013)

<sup>21</sup> (export.gov, 2013)

<sup>22</sup> (PwC, 2013)

technical barriers to trade.<sup>23</sup> The agreement is meant to be a foundation for further collaboration between the two countries.

Regionally and internationally, Brazil's participation in [Mercosur](#) is relevant to the country's international trade relations. Mercosur is a political and economic agreement. Argentina, Paraguay, Uruguay, Venezuela, and Bolivia are party to the agreement along with Brazil. The purpose of the agreement is to promote free trade within the region, including the free movement of people, goods, and currency. Mercosur also pursues trade agreements with other regions of the world.

## IMPORT REGULATIONS AND STANDARDS

U.S. exporters to Brazil and Brazilian importers must register with Foreign Trade Secretariat. The complexity of the registration process varies by industry. US exports to Brazil are subject to a number of taxes and fees. Import taxes and fees are normally assessed during the customs clearance process. The primary taxes are Import Duty, Industrialized Product Tax and the Merchandise and Service Circulation Tax. Other taxes and fees may be applicable. Customs clearance is facilitated by an automated system, the Foreign Trade Integrated System (SISCOMEX).<sup>24</sup> Complete and accurate customs documentation is critical in Brazil. If any mistakes or misdeclarations are expected, it is likely that cargo will be held and fees will be assessed.<sup>25</sup> Companies without their own experienced export department should work with transporters and freight forwarders that are familiar with the clearance process in Brazil and can clarify all requirements for completing the Brazilian import process.

The taxes, duties, and documentation requirements are not the only requirements for import that must be considered when exporting to Brazil; they are only the most basic. Brazil has strict standards rules and The National Institute of Metrology, Quality, and Technology (INMETRO), a government entity that is the operating arm of Brazil's standards regime, is an active organization.<sup>26</sup> Prior to exporting to the Brazilian markets, the applicable requirements for conformity assessment, product certification and labeling and marketing should be reviewed for all relevant products. Mercosur's standards should also be taken into account prior to exporting to Brazil.

- » Further details can be found in the US Commercial Service's overview of [Brazil's trade regulations and standards](#).

## GOVERNMENT AND DEFENSE PROCUREMENT

The US Commercial Service advises that in order to secure business with the Brazilian Armed Forces, companies will need to be prepared for "long and complex campaigns."<sup>27</sup> Entering the Brazilian market and working with the defense sector can be challenging and require a dedicated pursuit, but this could probably be said in relation to most major countries. The US Commercial Service offers suggestions for how the challenge can be met and one requirement they highlight, along with many other experts, is the establishment of a local office or a partnership with a local representative. That representative must be respected in the relevant sector and have established contacts to assist in sales. With the Brazilian government's aim of strengthening the technology and defense sectors, domestic development and production is also valued. Further, companies will be encouraged to establish long term partnerships with Brazilian companies to engage in development and production together and ultimately transfer knowledge and technology to the local market.<sup>28</sup>

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<sup>23</sup> (USTR, 2013)

<sup>24</sup> (US Commercial Service, 2013)

<sup>25</sup> (US Commercial Service, 2013)

<sup>26</sup> (US Commercial Service, 2013)

<sup>27</sup> (export.gov, 2013)

<sup>28</sup> (export.gov, 2013)

Brazil is a member of the WTO, but it is not a signatory of the Agreement on Government Procurement (GPA). The GPA recognizes that the government and its agencies are normally the largest purchaser of goods in any country and that they face pressure to favor domestic policies. The aim of the GPA is to open this government business to international competition.<sup>29</sup>

Foreign companies are allowed to bid on government tenders, but domestic entities are given priority. The Buy Brazil Act, [law 12.349/10 of 15 December 2010](#) is applied at the federal, state and municipal level. The law provides for a preference of up to 25 percent for goods and services produced in Brazil.<sup>30</sup> The EU has classified this law as a substantial barrier to exports to Brazil.<sup>31</sup> The 'law to promote the industrial base of defense' was published in 2013. It aims to develop the Brazilian defense industry into the main supplier for the Armed Forces and to increase exports in the sector by developing technology and decreasing costs.<sup>32</sup> This regulation will require the transfer of technology from foreign firms when domestic operations are established.<sup>33</sup>

Awareness of these laws that favor Brazilian products and services is important, but should not be viewed as a complete barrier to entry for American companies into the cyber security market. The domestic capability in the high tech defense sector is still limited and there remains room for imports. Further, American companies may also take advantage of the government's ambitions to develop domestic capabilities by establishing Brazilian affiliates and production facilities.

Developing relationships with the Brazilian government is a critical step that must be taken early on in the business development process, but online portals provide a view on tenders that are currently open. In addition to current opportunities, the tenders posted may present contact details useful in pursuing relationships. The following sites list Brazilian government tenders that may be relevant to cyber security providers:

- » The government created a special agency, SESGE under the Ministry of Justice to plan security efforts for the Games. Information on public tenders for this purpose can be accessed [here](#). SESGE announces international tenders for cyber security also. Request for information notices by SESGE are available [here](#).
- » Details on the procurement process for the Olympic Games are available [here](#). Interested US companies should pre-register through the Supplier section on the site.
- » Information Technology (IT) Tenders, Projects – Brazil [http://www.ittenders.com/information\\_technology\\_brazil.htm](http://www.ittenders.com/information_technology_brazil.htm)
- » Tenders Info – Brazil Tenders <http://www.tendersinfo.com/global-brazil-tenders.php>

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<sup>29</sup> (WTO, 2013)

<sup>30</sup> (European Commission, 2013)

<sup>31</sup> (European Commission, 2013)

<sup>32</sup> (MercoPress, 2013)

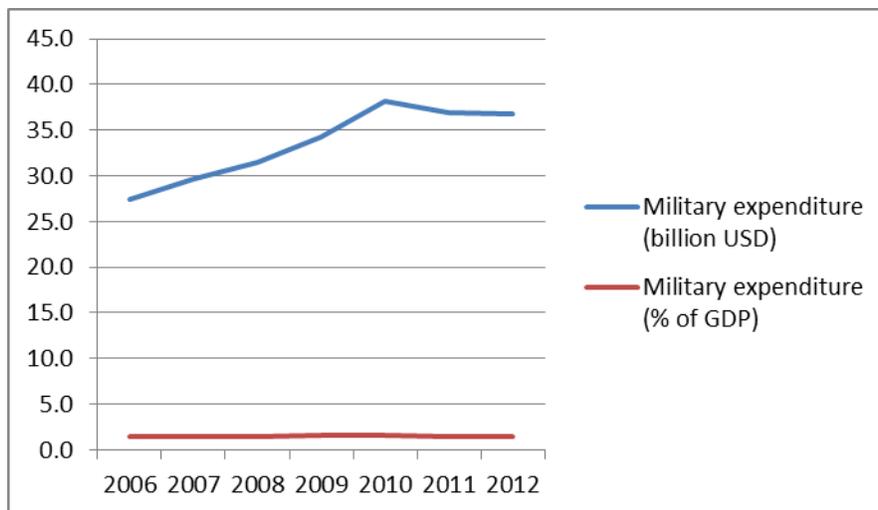
<sup>33</sup> (MercoPress, 2013)

# MARKET SIZE AND GROWTH

The Brazilian Federal Government initiated the [TI Maior](#) (Greater IT) project in August 2012. Through 2015 the government will invest more than \$200 million in domestic information technology, innovation and software development with more than \$15 million set aside for start-ups.<sup>34</sup> The government is also promoting the expansion of broadband coverage through the National Government Broadband Plan.<sup>35</sup>

Brazil's military budget proposal for 2013 was approximately \$37 billion. In a 2011 study, Brazil was ranked tenth in global defense spending<sup>36</sup> Brazil has plans to become a major global player in the defense industry and has room to grow, as evidenced by the fact that defense spending is currently less than 2 percent of GDP. Brazil is playing a larger role in regional and global security and is focused on replacing old platforms with new and technologically advanced solutions through a defense modernization program planned for the next 15-20 years.<sup>37</sup> The Army's Cyber Defense Project is alone expected to invest \$420 million through 2031. Additional spending is expected from other branches of the military.<sup>38</sup> See the [National Defense White Book](#)<sup>39</sup> for more details on these plans.

**Figure 1: Brazil military expenditures 2006-2012**



Source: SIPRI military expenditures database

<sup>34</sup> (export.gov, 2013)

<sup>35</sup> (export.gov, 2013)

<sup>36</sup> (export.gov, 2013)

<sup>37</sup> (BMI, 2013)

<sup>38</sup> (UMass, 2013)

<sup>39</sup> (Might require translation into Portuguese)

The growing defense and technological markets combine to create a sizable and growing cyber security market in Brazil. The government has recently passed a bill that exempts companies in the domestic defense industry from taxes for five years in order to increase the ability of domestic firms to supply the Brazilian defense department.<sup>40</sup> However, there is still room for imports.

In 2012 the size of the defense market was \$4.6 billion. The domestic production was \$3.1 billion, \$1.1 billion of which were exports. Therefore, over half of the domestic consumption was made up of imports at \$2.5 billion and \$1.1 billion came from the US.<sup>41</sup> Embraer is an aerospace company and Brazil's largest defense firm. Yet, "Boeing officials have listed Brazil as one of the few markets ripe for growth in the defense market. The defense firm had recently opened an office in Sao Paulo, the largest city in Brazil."<sup>42</sup>

While the government has also prioritized the development of the domestic high tech sector, the number of highly skilled workers does not match the growing demand for technology and the associated security. Further, while Brazil has been home to some IT companies and innovation, it is not where the major global technology firms are headquartered. In 2012, computer software imports were approximately \$5.7 billion while exports were only \$123 million.<sup>43</sup>

For more information, please see:

- » [Ministry of Defense](#) and the [Ministry of Development, Industry and Trade Commerce](#)

## MARKET SECTORS

The overall security market in Brazil is worth approximately \$24 billion a year and growing at almost 20 percent each year<sup>44</sup>. Of this, the electronic security equipment is worth \$1.5 billion and expected to keep growing each year. Opportunities related to cyber security include data cryptography, access control, biometrics and security for financial institutions in order to prevent fraud. Brazil's high expenditures on infrastructure development for the 2014 World Cup (soccer) and 2016 Olympics Games include spending on cyber security. Broad security spending for these initiatives is estimated to be roughly \$1.4 billion<sup>45</sup>. US exporters can explore these lucrative opportunities. The telecommunications industry which is growing exponentially also has demand for cyber security solutions.

- » The [LAAD defense and security trade event](#) provides information and opportunities in this sector. [ISC Brazil](#) also offers additional networking resources.

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<sup>40</sup> (BMI, 2013)

<sup>41</sup> (export.gov, 2013)

<sup>42</sup> (DOD Buzz, 2013)

<sup>43</sup> (export.gov, 2013)

<sup>44</sup> (ITA Safety and Security guide, 2013)

<sup>45</sup> (ibid)

# TECHNOLOGICAL ENVIRONMENT

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Brazil is ranked as the largest online market in Latin America<sup>46</sup> and the seventh largest globally.<sup>47</sup> While internet usage is still below that of the US and Europe, it has grown significantly in the 21<sup>st</sup> century and continues to grow. According to the World Bank, 49.8 percent of Brazilians and 81 percent of Americans were using the internet in 2012.<sup>48</sup> “IT end-user spending in Brazil is expected to grow to \$134 billion in 2014.”<sup>49</sup>

There are approximately 260 million mobile phone lines in operation across Brazil.<sup>50</sup> As of June 2013, a study declared that more Brazilians were accessing the Internet via mobile devices than through the Internet.<sup>51</sup> ANATEL is the government agency that regulates the telecommunications industry and it is leading an action plan for the improvement of personal mobile devices. The telecommunications industry has been privatized in Brazil, but similar to other utilities within the country, the government remains involved, and there are restrictions on the involvement of foreign firms in the industry.

The Brazilian government has selected the high tech industry and information and communications technology as strategic priorities. In a presentation to the Organization of American States (OAS), the Institutional Security Office (GSI) highlighted the potential of the domestic markets. They placed Brazil as the third largest market (behind China and the US) in computers, the fourth largest in mobile phones and second largest in ATMs. As with other manufacturing initiatives of the government, an emphasis will be placed on the development of domestic capabilities and knowledge transfer requirements of foreign investors.<sup>52</sup>

The government itself uses the internet extensively and has a wide range of sites that are available to the public. In 2011, it was estimated that GSI (the Institutional Security Office in charge of security measures in the public administration) manages 320 public computer networks that cover about one million public sector users from 37 cabinet offices and 6,000 government entities.<sup>53</sup> The 2011 cyber-attack that was labeled Brazil's largest cyber-attack ever was an attack on government websites and systems. The government just announced in October 2013 that a secure email service would be created.<sup>54</sup> This announcement comes in response to reports that the NSA has accessed the emails of the state owned oil company Petrobras and of government officials including President Rousseff.

There is also a dark side to Brazil's extensive technological engagement. In the third quarter of 2009, Brazil surpassed the US and China and became the second largest source of cyberattacks. Russia was the largest.<sup>55</sup>

- » The [Ministry of Science, Technology and Innovation](#) and the [Brazilian Association of Software Companies](#) are valuable resources for information on opportunities related to information technology.

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<sup>46</sup> (European Travel Commission 2012)

<sup>47</sup> (European Travel Commission 2012)

<sup>48</sup> (World Bank, 2013)

<sup>49</sup> (export.gov, 2013)

<sup>50</sup> (Mari, Angelica, 2013)

<sup>51</sup> (Mari, Angelica, 2013)

<sup>52</sup> (OAS, 2012)

<sup>53</sup> (Estrada, Isabel, 2011)

<sup>54</sup> (BBC, 2013)

<sup>55</sup> (Barrett, Larry Planet, 2010)

# LEGAL ISSUES

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Brazil's civil law is based in the Civil Code of 2002. In PwC's 2013 report, *Doing Business and Investing in Brazil*, Brazil's legal system is referred to as "slow and cumbersome."<sup>56</sup> Analysts suggest that in particular, intellectual property and terrorism laws require further development. As a democracy and a country with memories of military rule, there is significant public concern about the protection of civil liberties.

## INTELLECTUAL PROPERTY RIGHTS

"According to the U.S. Trade Representative (USTR), Brazil has improved its record on protecting intellectual property rights in recent years. In recognition of this progress, USTR lowered Brazil from the Priority Watch List of countries with significant intellectual property rights violations to the Watch List in 2007."<sup>57</sup> This move represents an improvement, but the USTR remains concerned amount piracy and counterfeits in Brazil.<sup>58</sup> Cooperation in addressing intellectual property rights between the US and Brazil continues under the Trade and Economic Cooperation Agreement signed in March 2011.<sup>59</sup>

## CYBER LAW

President Rousseff has declared that she will "introduce a measure at the United Nations to establish an 'international civilian framework' to protect the privacy of Internet users."<sup>60</sup> Along similar lines, she has also decided to host an international summit on internet security in Brazil in 2014.<sup>61</sup> As Brazil pushes for internet independence from the US, requirements from the government for local hosting of applications and data are likely.

Reuters reported in October 2013 that a bill had been drafted that would require internet service companies (e.g. Google, Facebook, Twitter) to store data obtained from Brazilians within Brazil. This would require major companies to establish or utilize existing data centers in Brazil.<sup>62</sup>

A bill introduced in 2009 has gained renewed interest since the NSA allegations. The *Marco Civil da Intranet*, also referred to as the Internet Constitution "aims at establishing rights and duties of Brazilian individuals, government and businesses regarding internet use."<sup>63</sup>

# POLITICAL ENVIRONMENT

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The political power and influence of Brazil has been on the rise since the 1990s. The growth has been particularly strong during the past decade in which the country has seen enhanced political and economic stability and a stronger global profile. Brazil not only plays an ever increasing role in global trade and

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<sup>56</sup> (PwC, 2013, page 13)

<sup>57</sup> (CRS, 2013)

<sup>58</sup> (CRS, 2013)

<sup>59</sup> (CRS, 2013)

<sup>60</sup> (Raw Story, 2013)

<sup>61</sup> (Raw Story, 2013)

<sup>62</sup> (Reuters, 2013)

<sup>63</sup> (ZDNet, 2013)

multilateral organizations, but also “has a long-term objective to become a major player in the global defense industry; both in Latin America, and abroad.”<sup>64</sup>

Brazil is a democracy with a federal structure with 26 states, a federal district, and 5,565 municipalities. The current president is Dilma Rouseff. Rouseff is a member of the same party as her predecessor, Luis Inacio Lula da Silva, *Partido dos Trabalhadores* (PT). Military governments ruled Brazil from 1964 – 1985 and during the first ten years of restored civilian democracy the country suffered from recession and political instability.<sup>65</sup> Since then, economic and political stability have increased along with social inclusion.

## BRAZIL – US RELATIONSHIP

The United States (US) was the first country to recognize Brazil’s independence in 1822 and as the two largest democracies in the western hemisphere the countries have a long history and many reasons to work together. According to the Congressional Research Service, the relationship has been, in general, positive during recent years.<sup>66</sup> The relationship has continued to evolve recently with 10 bilateral agreements signed in March 2011 and five in April 2012. Twenty active dialogues are in progress, four at the presidential level: the Global Partnership Dialogue, the Economic and Financial Dialogue, the Strategic Energy Dialogue, and the Defense Cooperation Dialogue.<sup>67</sup> US and Brazilian cooperation on security matters has been limited in the past, but collaboration on counternarcotics, counterterrorism, and defense has increased recently.<sup>68</sup>

During a visit supporting the Defense Cooperation Dialogue, Leon Panetta, the then US Secretary of Defense, said, “Brazil is a global power. Brazil is a positive force for stability, not only in the Americas but across the world.”<sup>69</sup> The priority activities for the dialogue in 2012 were **cyber security**, science, innovation and technology transfer, logistics, communications, humanitarian assistance and disaster response, and cooperation in support of Africa nations<sup>70</sup> Concerning cyber security, Panetta explained that US-Brazilian cooperation will be beneficial in “a whole new arena. I think both of our nations are concerned about ... how we can effectively defend against those potential attacks.”<sup>71</sup>

The US is Brazil’s second largest export market and Brazil’s second largest source of imports (Brazil’s number one trading partner is China).<sup>72</sup> These strong economic ties support the political relationship, along with shared regional and democratic interest.

- » Further details on US-Brazil relations can be found in the [Congressional Research Service’s February 2013 report](#).

## SAFETY AND SECURITY

Crime rates are high in Brazil. Visitors should take common sense precautions in the major cities. In the *favelas*, shantytowns, crime rates are particularly high and U.S. government employees are not permitted to travel there. These areas can be avoided, along with border areas where terrorists and traffickers are known to operate. American citizens are generally not targeted in Brazil.<sup>73</sup>

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<sup>64</sup> (Business Monitor International, 2013, page 7)

<sup>65</sup> (CRS, 2013)

<sup>66</sup> (CRS, 2013)

<sup>67</sup> (U.S. Department of State, 2013)

<sup>68</sup> (CRS, 2013, page 16)

<sup>69</sup> (U.S. Department of Defense, 2012)

<sup>70</sup> (U.S. Department of Defense, 2012)

<sup>71</sup> (U.S. Department of Defense, 2012)

<sup>72</sup> (PwC, 2013)

<sup>73</sup> (US Department of State – Travel.State.Gov, 2013)

- » When planning a trip to Brazil it is advisable to check the [State Department's International Travel Information site for Brazil](#).
- » Registration in the State Department's [Smart Traveler Enrollment Plan](#) will allow you to sign up for travel alerts and for the State Department to assist you in the event of an emergency.

## ECONOMIC ENVIRONMENT

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Brazil's increased political influence is due in large part to its economic growth and relevance as a trade and investment partner for the major economies of the world. Brazil's Gross Domestic Product (GDP) of \$2.4 trillion makes it the largest economy in Latin America and the eighth largest in the world.<sup>74</sup> The average growth rate over the past decade has been 3.7 percent. Brazil bounced back quickly from the most recent global financial crisis, going from a 0.3 percent contraction in the economy in 2009 to 7.5 percent growth in 2010.<sup>75</sup> Growth slowed again in 2011 and 2012 and is projected by the IMF to be 4 percent in 2013.

The government generally supports the free market and free enterprise and has privatized many utilities, roads, ports, etc. However, some state control and protectionist measures remain in place. The petroleum industry is a state owned and recent oil and gas discoveries could make Brazil a top oil exporter. The money from this discovery along with growth in general has allowed the government to pursue a variety of initiatives, one of which is the modernization of its military.

The country's recent growth and growth potential coupled with the vast natural resources and extensive manufacturing capabilities make it an attractive market, but challenges remain. The extensive bureaucracy, taxes, underinvestment in infrastructure and social inequality do present challenges that must be considered when developing a business plan for the Brazilian market.<sup>76</sup>

- » The [CIA's World Factbook](#) provides additional descriptive statistics regarding the Brazilian economy.
- » The [US Commercial Service](#) provides market research on potential markets in Brazil and provides advice for doing business there.

## SOCIO-CULTURAL ENVIRONMENT

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The official language of Brazil is Portuguese and the dominant religion is Roman Catholic. The population is diverse and includes people with a wide range of backgrounds: Portuguese, Italian, German, Japanese, East European and African immigrants.<sup>77</sup> The level of education has improved along with many other things over the past decade, but a need for further improvement remains. Approximately 80 percent of the population is literate and 9.5 percent of enrolled students go on to higher education.<sup>78</sup> There is a need to continue to develop the skilled work force, particularly in IT and engineering.<sup>79</sup>

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<sup>74</sup> (CIA World Factbook, 2013)

<sup>75</sup> (CRS, 2013)

<sup>76</sup> (PwC, 2013)

<sup>77</sup> (PwC, 2013)

<sup>78</sup> (PwC, 2013)

<sup>79</sup> (Forbes, 2012)

The growth of Brazil's population, economy and influence make it a very attractive market, but as with most emerging markets challenges remain for business and individuals looking to trade with and invest in the country. The extensive bureaucracy and slow legal process cannot be ignored.<sup>80</sup> Brazil was ranked no. 116 out of 189 countries for ease of doing business by the World Bank in 2013.<sup>81</sup> The ranking should not necessarily deter a company from looking to invest in or sell to Brazil, but it does highlight the need for extensive research and planning in advance of conducting business. It also points to the value in having a Brazilian partner and trusted local advisors. Experts indicate that Brazil is moving in the right direction, as HSBC did in their 2012 report on the business environment in Brazil. "There are still a few reforms to be implemented by the new Government, but Brazil is demonstrating that it is becoming increasingly connected with the international business network."<sup>82</sup>

Brazil has been selected to host the 2014 World Cup and the 2016 Summer Olympics. The selection of Brazil as the host for these major events is a sign in itself of the country's cultural position. However, the country's preparedness in relation to infrastructure and security has been widely questioned and those questions are spurring investment in these areas.

## DEMAND FROM THE PRIVATE SECTOR

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With a quickly growing commercial sector, there is also increasing use of information technology outside the functions of government and consequently a growing need for cyber security hardware, software and services. Brazil is home to eight of the Fortune 500 companies. State-owned Petrobras is the largest with a global rank of 23 and revenue in 2012 of \$145,915 million. The other seven companies that make the Fortune 500 list are Banco Brasil (88), Banco Bradesco (136), Vale (159), JBS (286), ITA SA Investimentos (311), Ultrapar Holdings (380) and Brazilian Distribution (399).<sup>83</sup>

After allegations that the NSA was targeting Petrobras, the company announced that it will invest nearly \$9 billion over the next five years to improve data security.<sup>84</sup> The President of the company said Petrobras was already spending over \$1.6 billion on security and had 3,000 employees addressing security in 2013.<sup>85</sup>

Not only are the Brazilian banks large, but their online services are extensive and Brazilian consumers are accustomed to conducting a wide range of banking services online. Banco Brasil has 7.9 million online customers and Bradesco has 6.9 million.<sup>86</sup> The large and well-developed financial sector is seeking cyber security solutions to prevent fraud.<sup>87</sup> The size of the cyber security market in the Brazilian banking sector is not only a result of the large banks with many customers conducting a wide range of transactions online, but it is multiplied by the number of cyber criminals in Brazil. Brazil is considered a major source of the malware that is built to steal data from individuals conducting banking online.<sup>88</sup> The banks

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<sup>80</sup> (PwC, 2013)

<sup>81</sup> (IFC and World Bank, 2013)

<sup>82</sup> (HSBC, 2012, page 4)

<sup>83</sup> (CNN Monday, 2012)

<sup>84</sup> (Leahy, Joe, 2013)

<sup>85</sup> (Leahy, Joe, 2013)

<sup>86</sup> (SecureList, 2013)

<sup>87</sup> (export.gov, 2013)

<sup>88</sup> (SecureList, 2013)

have employed a variety of tools to protect customer data, but the threat remains along with the need for new cyber security solutions.

Symantec has already recognized Brazil as one of the largest cyber security markets. Symantec consider Brazil as their largest emerging market and expects it to soon move ahead of Italy and become the tenth largest global market for the company. On this basis, Symantec decided to begin production in Brazil.<sup>89</sup>

**Table 1: Brazilian Cyber Security Market at a Glance**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"><li>• As the economy continues to grow investments in defense are expected to increase as well</li><li>• Large market with room for further growth</li></ul>	<ul style="list-style-type: none"><li>• Cumbersome legal process</li><li>• Bureaucracy</li><li>• Time required to build relationships</li></ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"><li>• Military modernization plans</li><li>• The need for cyber security is in the news now</li><li>• 2014 World Cup and 2016 Olympics</li></ul>	<ul style="list-style-type: none"><li>• Political issues with the US due to allegations against the NSA</li><li>• Regulations favoring Brazilian businesses</li></ul>

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<sup>89</sup> (BN Americas, 2011)

# APPENDIX: USEFUL LINKS

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## Country Information:

- » [CIA, The World Factbook – Brazil](#)
- » [Congressional Research Service, Brazil –U.S. RelationsUS Commercial Service – Brazil](#)
- » [US Department of State, Travel.State.Gov – Brazil](#)

## Cyber Security in Brazil:

- » [Cabinet of Institutional Security Brazil \(in Portuguese\)](#)
- » [Ministry of Defense Brazil \(in Portuguese\)](#)
- » [Presentation by Brazil's GSI to the OAS on the Information Security of Critical Infrastructure in Brazil](#)

## Government Tenders:

- » [Information Technology \(IT\) Tenders, Projects – Brazil](#)
- » [Tenders Info – Brazil Tenders](#)
- » [Global Tenders – Brazil](#)

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