



Connectivity Scorecard 2009

Brazil – A moderate performer that only shines in the government sector

Overview

Brazil puts up a moderate performance on Connectivity Scorecard 2009, coming in 8th among its peer group of 25 resource and efficiency-driven¹ economies. With a score of 5.12, it significantly outpaces BRIC² nations China and India, which rank 15th and 20th respectively, but lags a few rungs behind Russia which takes the 6th position.

When compared to the new South American entrants to the Scorecard, Brazil's performance meets a similar fate. The country is outpaced by high-flying Chile and Argentina, while it fares slightly better than Colombia. Overall, however, four South American countries in the top ten is indicative of a region which is moving in the right direction on connectivity.

Strengths and weaknesses

Brazil's scores are broadly consistent with its overall "moderate" score. It has weak but not catastrophic business metrics, and average consumer scores. Only in government does it shine.

Brazil's lighthouse achievement is its superior government infrastructure. With a score of 0.93, the country is the highest scorer on this sub-category. As was the case in Connectivity Scorecard 2008, Brazil attains among the top scores on e-government measures, both in the Brookings Institution overall ranking and in the relative spending levels of government on hardware, software and services. Its performance in the sub-category of government usage and skills too is relatively strong – with the country scoring a 0.69 compared to the highest score of 0.92 in this area.

| | Score | Weight |
|-------------------------------------|--------------|--------|
| Consumer Infrastructure | 0.52 (0.81)* | 0.12 |
| Consumer Usage & Skills | 0.55 (0.84)* | 0.12 |
| Business Infrastructure | 0.46 (0.73)* | 0.11 |
| Business Usage & Skills | 0.48 (0.74)* | 0.56 |
| Government Infrastructure | 0.93 (0.93)* | 0.01 |
| Government Usage & Skills | 0.69 (0.92)* | 0.07 |

* The score of the leading performer for this component

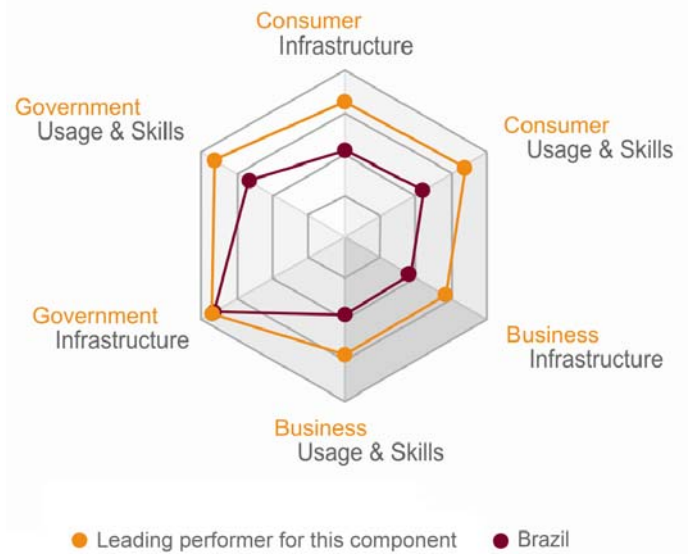
¹ As defined by the World Economic Forum

² The term BRIC refers to Brazil, Russia, India, and China – four rapidly developing nations that are thought to be seeking to form a political "alliance", and thereby converting their growing economic power into greater geopolitical strength.



Unfortunately both sub-categories of the government segment have very low weightings in the Scorecard. Government infrastructure is assigned a meager 0.01, while government usage and infrastructure ends up with 0.07. Thus despite the country's stellar performance in this segment, its overall impact on the Scorecard is negligible.

Brazil's biggest weakness is its business segment, and particularly its performance in the business usage and skills category. While the country scores what seems to be a moderate score of 0.46 and 0.48 compared to the highest scores of 0.73 and 0.74 in business infrastructure and usage and skills respectively, the high weighting of 0.55 given to the second sub-category ends up making this Brazil's Achilles heel, weighing heavily on the country's overall performance.



It is important to note that while Brazil scores relatively well on PC penetration, it is outpaced by some of the new nations added to the list, including Chile, Argentina, and Turkey, all of whom have at least twice the bandwidth of that available in Brazil. On business usage, secondary school enrolment in Brazil is relatively strong, although completion rates are not; and business spending levels on computer services is moderate.

In addition, Brazil's performance in the consumer segment too is average, though the country performs reasonably well compared to its peers in both sub-categories – scoring a 0.52 and 0.55 for infrastructure and usage and skills respectively. Its score in fact reflects its performance on household measures of broadband and mobile penetration, which are halfway between the lowest and the best-performing countries. In addition, while Brazil performs relatively well in terms of basic literacy attainment and in terms of gender equality in access to the Internet, its performance is just slightly above the median relative score of the sample surveyed.

Analysis

While Brazil maintains a respectable overall position in the rankings, its ratings on individual metrics and sub-categories require attention. The appropriate policy response would be to focus on combining remedies that are focused on elements of the ICT industry (e.g., telecoms) with a more holistic policy that also focuses on other inputs into human capital.

On the telecom front, like Mexico, Brazil has opened up virtually all sectors of the telecommunications market to competition and has an autonomous and sector-specific regulator in charge of telecommunications. What's more, VoIP phone calls are legal in Brazil, and there is relatively good bandwidth availability for international traffic. Therefore, while international traffic minutes per inhabitant are low in Brazil comparative to Malaysia, this may suggest that business usage in Brazil is primarily oriented towards serving the domestic market.

In conclusion, for Brazil to move to the next level of both connectivity and economic development, the focus of policy should not be narrowed to the ICT sector, but on broader matters that address the development of human capital skills and training.

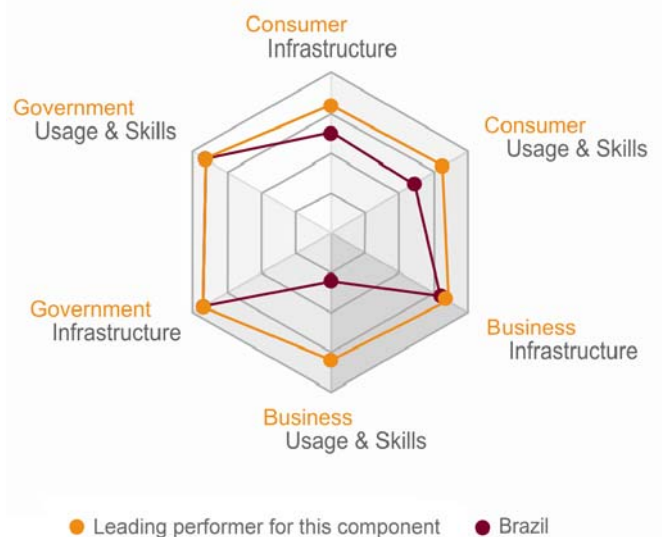


APPENDICES

2009 compared to 2008

We have repeatedly stressed the fact that the Connectivity Scorecard is designed to provide a comparison of how countries rank in relation to each other at a given point in time. As with other indices of relative rankings, it is hard to interpret absolute scores and it is hard to make comparisons of absolute scores over time.

In addition, we substantially expanded and revamped the information base for the current version of the Scorecard and we also expanded greatly the list of countries that we included for consideration in 2009. These factors mean that it is not possible to generate very direct comparisons between absolute scores over time and to easily interpret these as “improvements” or “deteriorations.”



Although Brazil's score appears to have declined slightly from 5.28 to 5.12, the country more or less maintains a respectable overall position in the rankings. However, the ratings of Brazil on certain individual metrics and sub-categories have certainly been affected by the significant expansion of the sample of countries against which Brazil was benchmarked. Relative to the countries in last year's sample, Brazil had a very high score for the availability of international bandwidth. However, this year we included several countries that had significantly higher bandwidth availability levels. Similarly, we included additional countries that scored highly on broadband penetration, and we changed the basis for measuring broadband penetration to a “per household” basis, with an adverse impact on Brazil's performance. On the plus side, we decided to discontinue the usage of a survey-derived measure of mobile email and Internet usage on which Brazil had not performed well last year. Similarly, we were more “generous” to Brazil in our measure of secondary schooling enrolment, changing the metric that we considered from secondary school completion to secondary school enrolment (for which more complete, contemporary and comparable data are available).

Thus the 2008 radar chart for Brazil (see comparative star diagram on this page) shows generally higher relative scores on most sub-categories than Brazil achieves this year, but a slightly different pattern of strengths and weaknesses. We believe, however, that Connectivity Scorecard 2009 is a better reflection of where Brazil truly stands, as the basis on which it is benchmarked has been expanded significantly.

About Connectivity Scorecard

Connectivity Scorecard is a global ICT index, which measures the extent to which governments, businesses and consumers make use of connectivity technologies to enhance social and economic prosperity. Unlike other research available, Connectivity Scorecard also measures “usage and skills,” such as literacy, the use of enterprise software and the accessibility of women to ICT.

Nokia Siemens Networks has commissioned the study, which is the first of its kind to rank countries not only on their deployment of ICT infrastructure but also on the extent to which people, governments and businesses put this infrastructure to economically productive use.

The study is created by Leonard Waverman, Fellow of the London Business School and Dean and Professor at the Haskayne School of Business at the University of Calgary, and conducted under his direction by international economic consulting firm LECG.

For more information on Nokia Siemens Networks’ Connectivity Scorecard, visit www.connectivityscorecard.org

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