

# Connectivity Scorecard 2011

## South Africa



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**4.68**

	Score	Weight
<b>Consumer</b> Infrastructure	0.30 (0.88)*	0.14
<b>Consumer</b> Usage and Skills	0.35 (0.70)*	0.14
<b>Business</b> Infrastructure	0.44 (0.64)*	0.48
<b>Business</b> Usage and Skills	0.61 (0.71)*	0.15
<b>Public sector</b> Infrastructure	0.83 (0.83)*	0.07
<b>Public sector</b> Usage and Skills	0.68 (0.68)*	0.02

\*The score of the leading performer for this component

Table 1: Component Scores & Weights 2011

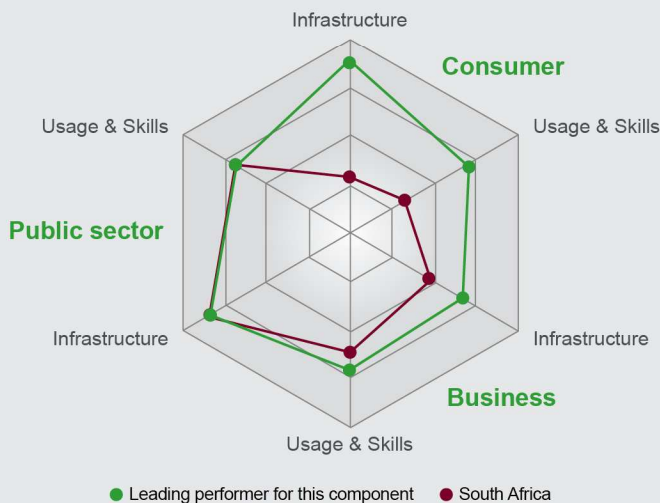


Fig 1: Component Scores 2011

### Overview

With a score of 4.68, South Africa falls seven places to rank 9<sup>th</sup> among the Resource and Efficiency-driven<sup>1</sup> economies on the 2011 Connectivity Scorecard.

South Africa owes the change in its score and ranking substantially to changes in the methodology - specifically, a re-weighting that affected the business components of the Scorecard, and also the use of new data and indicators that adversely affected South Africa. Further, South Africa perhaps suffers from the fact that many of the new indicators included on usage (e.g., measuring uptake of mobile data services) for which standard sources do not provide information for South Africa in detail. On the other hand, given the variability in its performance on existing indicators, there is no guarantee that South Africa would have performed well on these indicators.

### Strengths

South Africa's twin strengths lie in its business and public sectors' spends on ICT. As in all previous editions of the Scorecard, South African businesses continue to invest heavily on various forms of ICT—not only IT and telecom services but also IT hardware and software. Furthermore, the estimated government, healthcare and education spending on ICT from data provided by WITSA's Digital Planet publication flatters South Africa's performance considerably. South Africa's high spending undoubtedly ensures that it scores the highest on both public sector components of the Scorecard.

### Weaknesses

Conversely, there are many areas where South Africa's performance is lacking. As was also the case last year, consumer penetration of internet and broadband needs improvement. Further, the performance on virtually all aspects of consumer usage and skills is moderate or

<sup>1</sup> As defined by The World Economic Forum [www.weforum.org](http://www.weforum.org)

even weak, with the exception of adult literacy which is respectably high. On the business component, available internet bandwidth requires improvement, and the country (like many others) is a much less significant ICT exporter of goods and services than the leading countries in these components (Malaysia and India, respectively). On the public sector component of the Scorecard, South Africa performs poorly on the two components introduced this year - the U.N. e-Government indices that track the availability of and participation in online government services. This is quite surprising given the high level of overall ICT spending by the government, education and healthcare sectors in South Africa.

### Conclusions

South Africa may have been somewhat penalised, more than other countries in the sample, by the change in data used. This year's study included metrics on ICT exports and imports, which were designed to overcome data constraints that didn't provide a sufficient picture of ICT spending, investment and usage in several resource and efficiency-driven economies. Without these indicators, South Africa would have finished 6<sup>th</sup> with a score of 5.71. Furthermore, in addition to not including the new indicators, had last year's weights been used, South Africa would have scored 6.85 and finished 3<sup>rd</sup>. Is South Africa's significantly poorer performance this year down to just a statistical quirk and is not meaningful? The answer is "Most likely not." First, the weights used this year are more up-to-date and more specific than the weights used in previous years. Thus even excluding the controversial new indicators, South Africa would have suffered a considerable slide in its ranking. Second, there has always been a surprising discrepancy between South Africa's assessment by many other agencies that rank ICT performance and the reported high levels of business and government ICT spending. Perhaps the "controversial" new indicators actually pick up on relevant aspects of the ICT environment in South Africa which are not captured by the private forecasters who project ICT spending levels in the business sector. Moreover, South Africa simply has genuine weaknesses in basic consumer infrastructure. In previous years, the high weight on business usage as well as the reported high levels of business spending resulted in an overall high score, but perhaps this masked the extent to which there is significant inequality in access to and usage of ICT within South Africa. Although South Africa still finishes reasonably strongly, perhaps the recasting of the Scorecard this year will focus needed attention on tackling that disparity.

Rank [*]	Country	Connectivity Score
1 [1]	Malaysia	6.61
2 [3]	Chile	6.21
3 [5]	Russia	5.68
4 [7]	Turkey	5.51
5 [4]	Argentina	5.46
6 [6]	Brazil	5.14
7 [8]	Mexico	4.87
8 [10]	Ukraine	4.81
9 [2]	South Africa	4.68
10 [9]	Colombia	4.06
11 [12]	Thailand	3.68
12 [13]	Tunisia	2.79
13 [15]	Vietnam	2.73
14 [17]	China	2.72
15 [14]	Iran	2.41
16 [19]	Philippines	2.15
17 [n/a]	Syria	2.11
18 [20]	Indonesia	2.01
19 [16]	Sri Lanka	2.01
20 [18]	Egypt	1.89
21 [21]	India	1.25
22 [25]	Pakistan	1.14
23 [23]	Nigeria	1.09
24 [22]	Kenya	0.95
25 [24]	Bangladesh	0.90

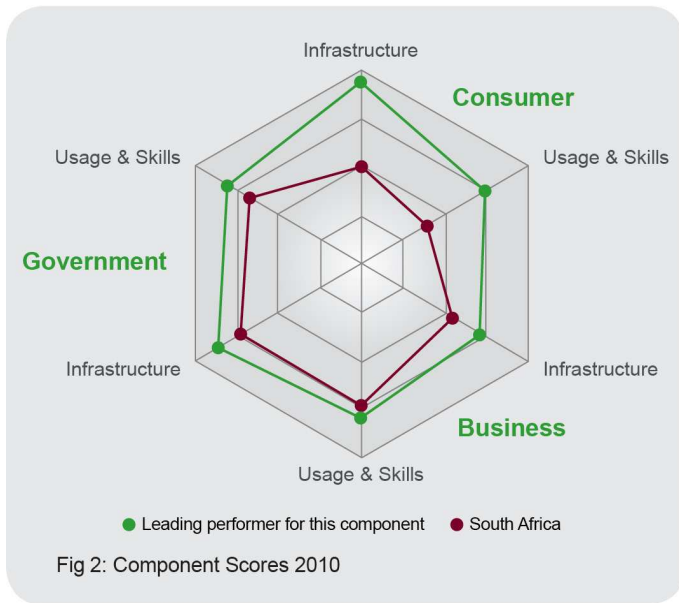
\*last year's rank in parenthesis

Table 2: Connectivity Scorecard 2011 Results – Resource & Efficiency-driven Economies

### 2011 vs. 2010

South Africa ranks 9<sup>th</sup> this year with a score of 4.68, compared to 2<sup>nd</sup> place last year with a score of 6.18. The difference between scores and rankings this year<sup>2</sup> in 2011 as compared to 2010 is explained by two factors: first, there is a change in the weighting system, and secondly, there have been extensive changes to the data indicators used. With respect to the resource and efficiency economies, for the first time ever, the study has used specific data on the relative contributions of ICT investment (i.e., "ICT capital deepening") and human capital (i.e., "labour composition") to GDP growth. These new weightings tended to place substantially more weight on the "infrastructure" as opposed to "usage and skills" components for the business and public sector parts of the Scorecard. Had the same weights as in 2010 been used this year, South Africa would have scored 5.02 and

<sup>2</sup> For more information download the Connectivity Scorecard 2011 Report from [www.connectivityscorecard.org](http://www.connectivityscorecard.org)



finished eighth in the Scorecard, as the previous weights would have emphasised its high score on business usage and skills.

Second, owing to data constraints relating to other indicators in the business infrastructure and business usage and skills components, we included data on ICT exports of goods (under infrastructure), and ICT imports of goods and exports of services (under usage). The justification for these seemingly idiosyncratic choices is as follows: high levels of ICT exports are likely to be quite correlated with the development of a reasonably strong ICT ecosystem. Similar to the car industry, ICT manufacturing in one area is likely to spawn spill-over effects into ICT in other manufacturing and ICT investment in complementary areas (for instance, an initial advantage in computer assembly might lead to the location of mobile handset assembly in the country. This in turn will likely have positive spill-over effects into the wider economy). Not all countries are ICT exporters or need to have ICT or export-led growth strategies, however. Here high levels of ICT imports might suggest a high level of domestic demand for ICT and thus be correlated with high levels of usage.<sup>3</sup> High levels of ICT service exports are very likely to correlate with the presence of a critical mass of ICT user skills in the economy, which in turn could enable countries to support strong ICT sectors

<sup>3</sup> In fact, a good argument could be made that the “ICT imports” indicator should be stuck under the “business infrastructure” component since they could also be correlated with business investment. This does not, however, make much of a difference to the overall scores.

despite large sections of the population without ICT skills. In common with many other countries, however, South Africa suffers somewhat from the fact that relative to the leading countries, it is not a significant ICT trader.

Finally, on many indicators that were sourced from Yankee Group, there are no data for South Africa. While attempts have been made to compensate for this by including similar (if slightly duplicative) indicators from other sources, missing data related to new indicators might have also played a small part in South Africa’s decline from last year’s heights.

The Connectivity Scorecard is based on comparative scores between countries, and, therefore, each country’s performance is measured in relation to the best performing nation in each component at a given point of time. As with other indices of relative rankings, it is difficult to interpret the Connectivity Scorecard in terms of absolute “improvements” or “deteriorations” and to make comparisons of scores over time.

### About Connectivity Scorecard

The Connectivity Scorecard is a global ICT index which, unlike other available research, is the first of its kind to rank countries in terms of “useful connectivity”. That is, not only on the deployment of ICT infrastructure but also to measure the extent to which consumers, businesses and the public sector “make use” of connectivity technologies to enhance social and economic prosperity. This “useful connectivity” is defined as the bundle of infrastructure, complementary skills, software and informed usage that makes ICT the key driver of productivity and economic growth.

Commissioned by Nokia Siemens Networks, the study was created by Professor Leonard Waverman, Dean, Haskayne School of Business, University of Calgary, and Fellow, London Business School. The study was conducted by the consulting firms Berkeley Research Group and Commuicea.

For more information on the Connectivity Scorecard, visit [www.connectivityscorecard.org](http://www.connectivityscorecard.org)

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