

Connectivity Scorecard 2011

Portugal



Portugal
4.80

	Score	Weight
Consumer Infrastructure	0.66 (0.95)*	0.15
Consumer Usage and Skills	0.42 (0.79)*	0.15
Business Infrastructure	0.55 (0.86)*	0.27
Business Usage and Skills	0.44 (0.83)*	0.34
Public sector Infrastructure	0.19 (0.79)*	0.04
Public sector Usage and Skills	0.35 (0.79)*	0.05

*The score of the leading performer for this component

Table 1: Component Scores & Weights 2011

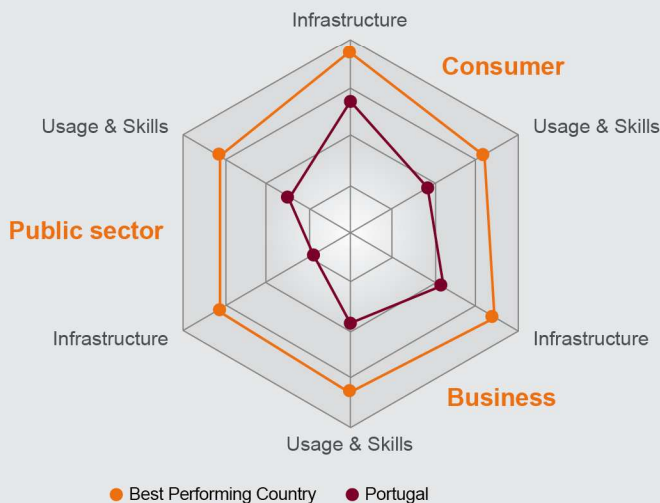


Fig 1: Component Scores 2011

Overview

Portugal scores 4.80 and retains its ranking of 21st amongst the Innovation-driven¹ economies on the Connectivity Scorecard 2011 index.

Portugal's performance in this year's Connectivity Scorecard is characterised by reasonable scores on a few metrics and poor performances on the majority of others. To some extent, this performance mirrors that of other Eastern and Southern European nations. The country's best scores come from the consumer infrastructure component where it has achieved a high level of broadband and 3G coverage. However, the country's consumer and business usage scores remain fairly poor, particularly with respect to internet usage.

Strengths

Fixed and 3G coverage close to 100%, and a high wireless penetration are few of the major strengths of Portugal. Mobile text usage is also quite high, but this might be due to cultural preferences for texting or a high relative cost of fixed and mobile voice calls. Fixed and mobile voice usage in Portugal is definitely below average and below the levels observed in other Southern European states. Average internet connection speeds compare favourably to the speeds achieved in many wealthier European countries.

From a business perspective, Portugal's only bright spots within the infrastructure component of the index are business uptake of mobile data services and use of new data protocols such as Ethernet and IP VPN. In terms of business skills and usage, Portugal produces the highest number of doctorates in science and engineering per capita among the innovation-driven

¹ As defined by The World Economic Forum www.weforum.org

economies. However, this advantage is counterbalanced by a low share of employment in science and technology fields and is insufficient to offset Portugal's very weak performance on most other measures of this component. Indeed, it appears that Portugal might be producing scientifically literate workers who are compelled to find employment in other countries where science and technology-driven industries are better established.

Weaknesses

As with many other Southern European states, a major area of weakness for Portugal is the consumer usage of its ICT infrastructure. Although fixed broadband coverage is almost 100%, broadband penetration is still very low. Regular internet users comprise just one third of the country's population compared to figures of 60%-70% elsewhere in Europe. The proportion of inhabitants using internet-based services like online banking and shopping is less than half the average level observed across all the innovation-driven economies.

Portugal's business sector performance is in general also poor. The country's deployment of secure internet servers and personal computers is well below average. Investment in ICT per capita is at less than half the Western European level and even lags behind the rest of Southern Europe. Business usage is also poor with low levels of business spending on IT and corporate data services. Also, fewer than half of Portugal's businesses have a website compared to 60-80% in most of Western Europe.

Portugal's government sector is also characterised by a low level of ICT deployment and usage. Government spending on IT hardware, software and services is considerably below the innovation economy average and Portugal ranks towards the bottom of the UN's e-government services and e-participation indices.

Conclusions

Portugal performs reasonably well on some measures of consumer and business infrastructure penetration, but in general the country is characterised by low levels of ICT infrastructure penetration and usage. The country lags well behind Northern Europe, but performs roughly in line with the rest of Southern Europe. Priority areas of focus for Portugal are encouraging the acceptance of fixed and wireless broadband (by consumers, business and government), and then promoting the usage of efficiency enhancing online services. The government sector could play an integral role in the development of ICT and steer the country towards a knowledge-based economy by increasing its own spending on hardware, software and

Rank [†]	Country	Connectivity Score
1 [1]	Sweden	7.84
2 [2]	United States	7.82
3 [4]	Denmark	7.47
4 [5]	Netherlands	7.45
5 [3]	Norway	7.09
6 [8]	United Kingdom	7.06
7 [7]	Australia	6.93
8 [9]	Canada	6.88
9 [6]	Finland	6.78
10 [11]	Singapore	6.40
11 [15]	Belgium	6.31
12 [n/a]	Austria	6.27
13 [17]	Germany	6.27
14 [12]	Ireland	6.08
15 [18]	France	6.06
16 [10]	Japan	5.89
17 [16]	New Zealand	5.84
18 [13]	Korea	5.80
19 [20]	Spain	5.09
20 [19]	Czech Republic	4.93
21 [21]	Portugal	4.80
22 [22]	Italy	4.79
23 [23]	Hungary	4.50
24 [24]	Poland	4.26
25 [25]	Greece	4.22

*last year's rank in parenthesis

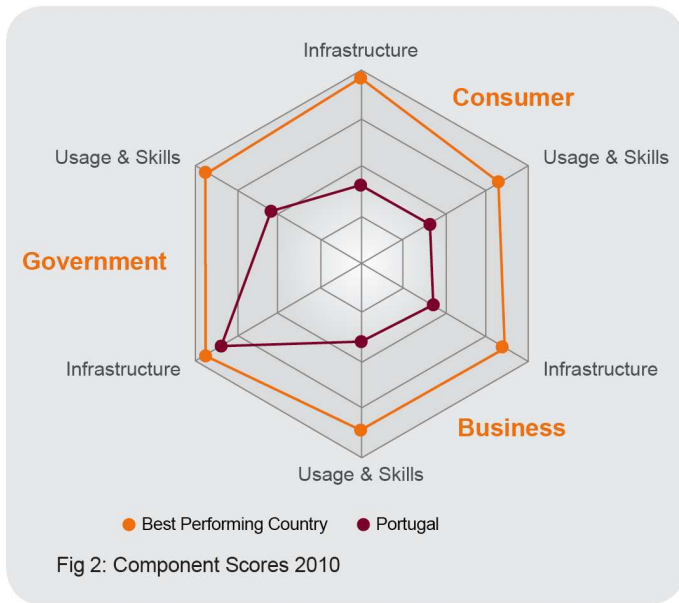
Table 2: Connectivity Scorecard 2011 Results – Innovation-driven Economies

services. In addition, it can also enhance its online presence by strengthening its e-governance services. Indeed, such extensive ICT spending in times of severe economic crisis is going to hurt Portugal in short-term. But more importantly, this would give Portugal the much-needed impetus for urgent reforms, helping it to reduce rigidities and practices that hinder the ICT growth in the business sector. For example, areas such as deployment of advanced networks have shown promising developments in Portugal, but adoption of new technologies among consumers and businesses has always been a big barrier.

2011 vs. 2010

Portugal scored 4.80 this year compared to a score of 4.45 in 2010, whilst maintaining its rank of 21st. The small variation in scores this year² is due to the change in weights. However, even if the same weights as in 2010 were used this year, Portugal's total score would have been 5.00 and its ranking would have been unaffected.

² For more information download the Connectivity Scorecard 2011 Report from www.connectivityscorecard.org



More significantly, the change in scorecard component scores highlights a notable improvement in Portugal's consumer and business infrastructure scores and a decline in its government sector scores.

The improvement in consumer infrastructure is primarily the result of the inclusion of three indicators which equalize the countries' performance namely fixed broadband coverage, 3G coverage and unique user mobile penetration. The majority of "innovation driven" economies have at least 80% to 85% of their population covered by wireless and fixed-line broadband networks indicating that there is limited variation amongst countries on these measures. In terms of unique mobile users, in majority of countries covered by the scorecard, 80% to 90% of their population own a mobile device. Thus, this indicator also shows only limited variation. If a more conventional but less merited indicator of "SIM cards per 100 population" (which is how many agencies measure mobile penetration) were used, the "mobile penetration" metrics would have shown some more variation. The reason being that some countries have SIM card penetration rates of 150 per 100 population or more.

The inclusion of additional metrics in the 2011 scorecard has had the opposite effect on government infrastructure scores. The new metrics have created additional dispersion in country scores, with some country scores on the "public" or "government" components falling substantially as a result. Portugal's score was significantly affected by this change as Portuguese government spending on IT hardware, software and services on a per capita basis is particularly low. However, Portugal's decline on these metrics is outweighed by the substantial improvement in consumer infrastructure performance.

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 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 Communicea.

For more information on the Connectivity Scorecard, visit www.connectivityscorecard.org

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