Connectivity Scorecard 2009

United Kingdom – A strong performer, especially in business arena

Overview

In continued defiance of both domestic and international opinion that tends towards belittling its record in Information and Communications Technology investment, the UK performed strongly in Connectivity Scorecard 2009, ranking sixth behind only the United States, three Nordic nations and new entrant the Netherlands.

As in 2008 the UK out-performed the other major European economies – France, Germany, Italy and Spain – none of which finished in the top 10.

	Score		Weight
Consumer Infrastructure	0.40	(0.88)*	0.14
Consumer Usage & Skills	0.49	(0.69)*	0.14
Business Infrastructure	0.76	(0.89)*	0.40
Business Usage & Skills	0.72	(0.72)*	0.23
Government Infrastructure	0.57	(0.93)*	0.06
Government Usage & Skills	0.52	(0.94)*	0.03

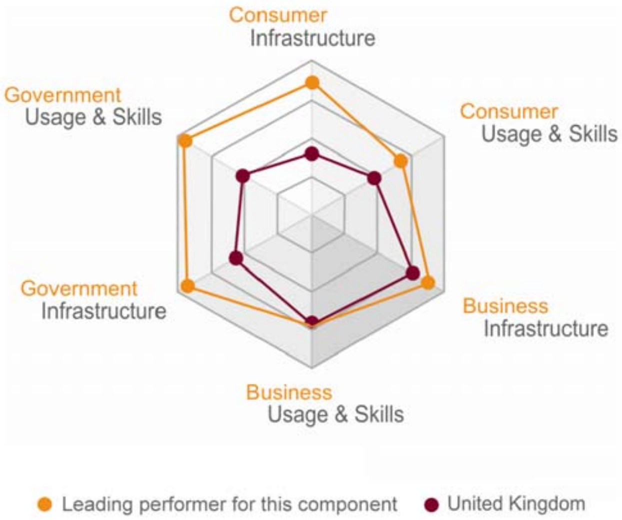
* The score of the leading performer for this component

While a score of 6.44 is sufficient for a high place in the Scorecard it belies a mixed performance – strong in the business arena, not so strong in the consumer segment – and affirms the 2008 message that there is no room for complacency even in the best performing nations, and that there is room for improvement everywhere.

Strengths

The key aim of the Connectivity Scorecard is to focus on the productivity enhancement and economic growth dividends of Information and Communications Technology rather than simply measuring how much ICT there is and how much a country spends on ICT, and the three segments analyzed – business, consumer and government – are weighted accordingly to reflect their impact in this regard.

In the case of the UK, the business infrastructure and usage and skills components account for almost two thirds of the total weighting of the results, and the UK's very strong showing in these elements accounts for its overall strength on Connectivity Scorecard 2009. Indeed, with a score of 0.72 in the business usage and skills component, the UK is the best-performing country on that measure and a score of 0.76 in business infrastructure (compared to the US, which top-scored with 0.89) is also among the strongest of all 25 innovation-driven economies.[1]



Among the measures on which the UK performed strongly were: PC penetration; metrics of e-commerce infrastructure such as secure server penetration; the proportion of businesses buying and selling on the Internet; the proportion of workforce that is employed in ICT-related occupations and ICT-specialist occupations; the level of enterprise spending/investment on telephony, hardware and software; and the share of advanced IP and Ethernet in corporate data revenues (reflecting both infrastructure availability and usage of high-specification options by businesses).

The UK also appears to have reasonably well-developed complementary capital, or human skills. The proportion of Science and Engineering graduates in the total pool of graduates is actually higher than the OECD average, and the proportion of workers in ICT-specialist occupations is also very high. The UK has greatly expanded tertiary educational attainment over the past 30 years.

The UK was one of the first countries to shift from a manufacturing-based economy to a services-led economy. The very high importance of finance, insurance and real estate (FIRE) industries in the UK economy may also explain high levels of business uptake of ICT, as FIRE industries are typically heavy ICT users.

Weaknesses

The UK's weakness falls in the consumer area, and in particular in the infrastructure space. Broadband presents a particular problem with a lack of fiber access networks in the UK and the fact that as of December 2007, the fastest generally available download speed from the incumbent operator was 8 Mbps. In mobile, 3G penetration is moderate compared to the Far East.

The UK performance on consumer usage and skills was also moderate, although it should be noted that the highest average achieved by any country on the indicators that comprise this sub-category was only 0.69. (The scoring for each individual indicator is on a 0 to 1 scale, with 1 being the score of the best-performing country, and the score given to an individual country being the ratio of its performance on the indicator to the performance of the best country among its peers).

The UK, perhaps surprisingly given the emphasis the current government has placed on online services, does not do so well on government-related measures either. Government spending on computer services and on hardware and software appears moderate, and while uptake of government online services is high, it does not match the UK performance on e-commerce metrics, which is very strong.

[1] As defined by the World Economic Forum

Analysis

The UK's reputation as a technological laggard is tough to fathom. The country tends to score reasonably well on most measures of international e-readiness, connectivity and digital opportunity. The UK communications regulator, Ofcom, has published a November 2008 report that shows the UK leading its other big European rivals in terms of consumer usage and Internet-savvy.

Our focus was clearly different from Ofcom's as we accorded higher importance to business measures. While any Scorecard is ultimately a subjective exercise in choosing indicators to examine and according these indicators "weights", we believe that the UK generally has a very well-developed business ICT ecosystem and that our findings are entirely consistent with the other research of which we are aware.

Specifically, the UK business sector investment is very ICT-centric compared to all but the Nordic nations and the United States. OECD data suggest that in 2004, 22% of UK investment was in ICT, compared to about 17% in France and 15% in Germany. Similarly, studies of the UK market for specific high-end products and services such as Ethernet and IP services will tend to find very high usage and availability rates.

The UK is also widely respected for its regulatory and market environment. The country was a pioneer of deregulation and full liberalization of the telecoms industry, and also has a very well-developed competition policy framework to back up the strong telecommunications regulatory environment. These combined with a general reputation for "good governance" and certain advantages accruing from the English language and the historical role of London as a financial center have meant that the UK has had little trouble in attracting significant investment and interest from both ICT-producing industries and ICT-using industries.

The UK telecoms market is potentially highly competitive. 50% of the homes in the UK are passed by a cable network, meaning that for 50% of UK customers there are three broadband access paths – cable, the BT network, and 3G mobile networks. The owners of these access paths are mutually exclusive, a condition that is perhaps unique in the OECD.

But strong performance in ICT, where technologies change rapidly, requires a ceaseless effort to keep pace with development, and there are signals that the UK could be in danger of losing some of its competitive edge if it does not respond more quickly to new challenges.

Despite a great deal of attention from the government and media, and a heated debate around the best way of achieving it, Next-Generation Access deployment in the UK is limited. Virgin Media is imminently rolling out a DOCSIS 3.0 network[2], and BT Group has announced its intention for a £1.5 billion investment in "super-fast" broadband, but the latter is contingent on achieving the right regulatory framework. While the UK has generally been thought of as having an effective regulatory regime, NGA regulation is a contentious issue in the UK. So far there has been significant reluctance to commit public funds to NGA broadband deployment. However, with the current economic crisis, and with even the United States talking about incentives and public funding for broadband deployment, public intervention may also be considered, especially in those areas where the business case for NGA is not clear cut.

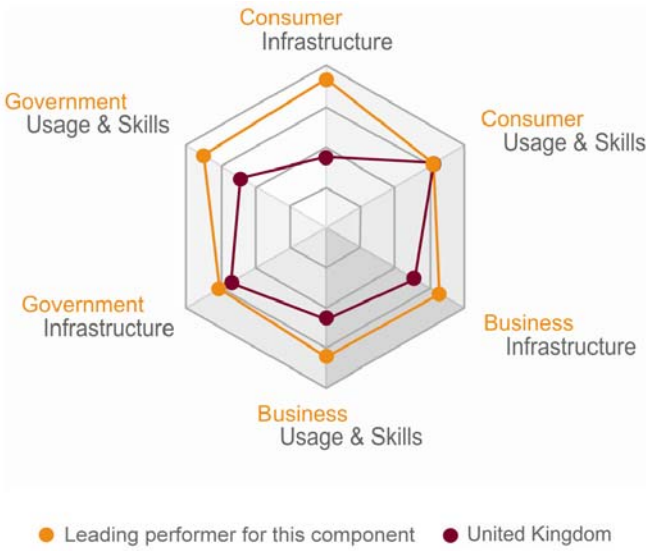
The UK faces some structural challenges too. The current financial crisis has exposed the country's reliance on the financial sector, which happens to be a major user of ICT and ICT-trained workers. But with this sector weakened, perhaps permanently, the UK should be looking at the ICT-manufacturing sector. It is here that there ought to be cause for concern. First, foreign ICT manufacturers are less likely

[2] Data Over Cable Service Interface Specification (DOCSIS) is an international standard developed by CableLabs and a number of contributing companies. As DOCSIS permits the addition of high-speed data transfer to an existing Cable TV system, it is used by many cable television operators to provide Internet access over their existing hybrid fiber coaxial infrastructure.

to view the UK favorably as an investment location than in the past. Second, the UK's domestically owned industries do not have a good record of investing in R&D, and research has found that multinationals in the UK are more high-tech and more innovative than domestically owned firms. The UK does not have a technology sector comparable to the United States or Japan, and while it produces a relatively high share of Science and Engineering first degrees, the performance at the post-graduate and doctoral levels is weaker. In summary, the UK needs to emphasize innovation and rediscover its historic strengths in science and engineering in order to remain an ICT leader.

APPENDICES

2009 compared to 2008



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 segment. The addition of new countries to the Scorecard in 2009 has therefore had an impact on the scores of all countries. At the same time, some data sources used in 2009 are different from those used in 2008, which also results in some changes. How these have affected the UK's score is explained below (for the UK performance in 2008 see also the comparative star diagram at right).

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."

Nevertheless we offer some comment on the UK ranking and score in 2009 compared to 2008. The UK finished 5th on Connectivity Scorecard 2008 and finishes 6th on Connectivity Scorecard 2009. The UK score increases from 6.13 to 6.44.

The increase in the UK score and the relative stability of its rankings is despite the fact that the UK performance on consumer infrastructure suffers from the inclusion of measures of NGA deployment and uptake. On the consumer usage front, the UK no longer tops the "text messaging" charts with countries like Denmark and even Portugal scoring somewhat higher.

The UK benefits from its very strong business usage environment, and the inclusion of measures such as Ethernet and IP service usage by businesses, as these are areas in which the UK scores very well by international standards. The UK score also receives some assistance from the fact that the weighting given to the business sector has increased from 57 percent to 62 percent as a result of using revised data. The greater number of business-related measures, and a change in the actual indicators and data sources used for many of these measures, contributes to the UK's strong performance in 2009.

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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