E-readiness rankings 2008
Maintaining momentum

A white paper from the Economist Intelligence Unit

About the 2008 e-readiness rankings

Since 2000, the Economist Intelligence Unit has assessed the world's largest economies on their ability to absorb information and communications technology and use it for economic and social benefit. The addition this year of Trinidad and Tobago brings to 70 the number of countries covered in the annual e-readiness rankings.

E-readiness is a measure of the quality of a country's information and communications technology (ICT) infrastructure and the ability of its consumers, businesses and governments to use ICT to their benefit. When a country uses ICT to conduct more of their activities, its economy can become more transparent and efficient. The e-readiness rankings also allow governments to gauge the success of their ICT strategies against those of other countries, and provide companies wishing to invest overseas with an overview of the world's most promising investment locations from the perspective of e-readiness.

In all, nearly 100 separate criteria, both qualitative and quantitative, are evaluated for each country by the Economist Intelligence Unit's team of analysts. These criteria are scored on their relative presence (or lack thereof) in a country's economic, industrial or social landscape. The criteria are organised into six categories that reflect the broader themes of e-readiness, such as the connectivity environment, government investment and policy, and the underlying social and cultural attitudes surrounding Internet adoption. The categories, and the individual criteria within them, are weighted according to our assumptions of their relative importance in fostering the country's information economy. Further details on the methodology can be found in Appendix 1.

In this and previous e-readiness rankings, the Economist Intelligence Unit has worked in co-operation with the IBM Institute for Business Value. IBM provided valuable feedback on the building and refinement of the rankings model and on the written analysis in the report. The Economist Intelligence Unit, however, is entirely responsible for the rankings and for the content of this white paper.

"The rankings illuminate the factors that are driving, or inhibiting, countries' progress in using ICT to advance economic and social development," says Peter Korsten, Global Leader of the IBM Institute for Business Value. "Whether the countries are, as IBM defines them, 'established leaders', 'rapid adopters' or 'late entrants', the public and private sectors must work together to promote the most effective use of digital technology toward this objective."

Executive summary

E-readiness, as the Economist Intelligence Unit defines it, is the measure of a country's ability to leverage digital channels for communication, commerce and government in order to further economic and social development. Implied in this measure is the extent to which the usage of communications devices and Internet services creates efficiencies for business and citizens, and the extent to which this usage is leveraged in the development of information and communications technology (ICT) industries.

As we have long maintained, the ways for a country to achieve and sustain e-readiness are varied and interrelated, and are shaped by factors in the economic, political and social environment, as well as by the breadth and quality of its ICT infrastructure and the digital services that are taken up. Assessed in the holistic approach employed in our rankings, it is apparent that, collectively, the world is moving up the e-readiness charts. Average e-readiness rose to a score of 6.39 in the 2008 rankings, up from 6.24 in the previous year.

The hard work of keeping up

This overall progress, however, masks some backtracking among a handful of countries, and conspicuously within the rankings' top ten. Denmark has, after four consecutive years as the world's most e-ready country, fallen four places, as has Switzerland, to fifth and ninth respectively. The United States is now the global e-readiness leader, with a score of 8.95, followed closely by Hong Kong, which has advanced two places. Finland has also dropped three places, from 10th to 13th, and has been supplanted in the top ten by Austria.

The slight decline in fortunes of the aforementioned European ICT leaders is mainly a result of their failure to sustain, in selected areas, the heady pace of development they had previously established. Both Finland and Denmark, for instance, suffered drops in their consumer and business adoption scores as they were unable to maintain previous ICT spending levels or to improve upon (albeit impressive) public and corporate access to digital channels. Similarly, Switzerland was judged to have lost some of the clarity of vision and commitment that had marked its e-government strategy.

By contrast, those countries that have advanced in the top ten—the US, Hong Kong, the Netherlands (7th) and in particular Australia (which jumped five places to claim the fourth spot)—have largely done so on the back of improvements in the expansion of connectivity, including in broadband accounts and WiFi hotspots, and also in the security of Internet connections. Improved performance in the area of innovation has also contributed to these countries' move up the rankings.

Economist Intelligence Unit e-readiness rankings, 2008
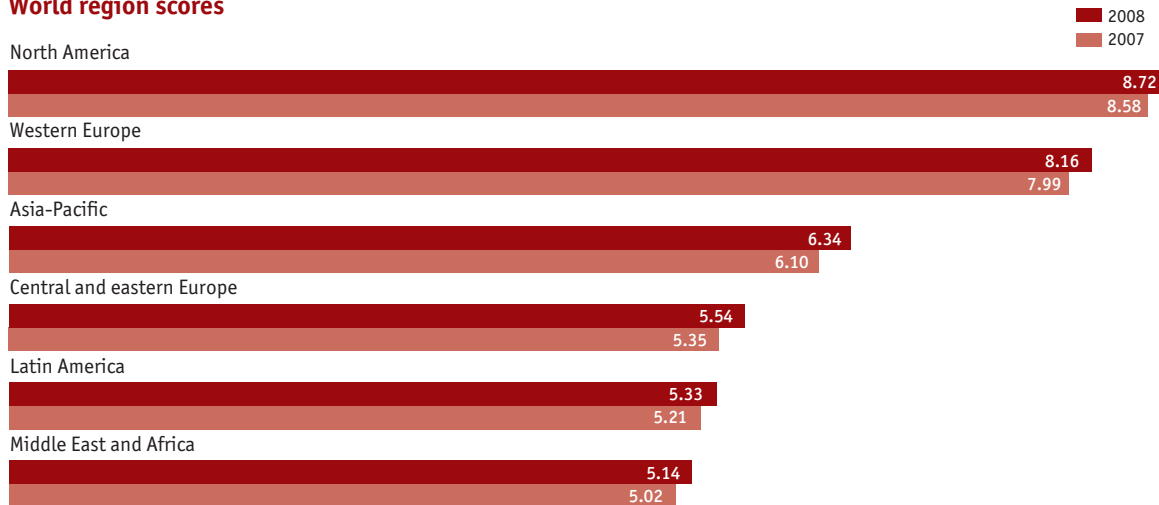Scoring criteria categories and weights*

Category	Weight
Connectivity and technology infrastructure	20%
Business environment	15%
Social and cultural environment	15%
Legal environment	10%
Government policy and vision	15%
Consumer and business adoption	25%

* See Appendix 1 for a more detailed description of the categories, individual criteria and their weights.
Source: Economist Intelligence Unit, 2008.

Economist Intelligence Unit e-readiness rankings, 2008
World region scores

██ 2008
██ 2007

North America
8.72
8.58

Western Europe
8.16
7.99

Asia-Pacific
6.34
6.10

Central and eastern Europe
5.54
5.35

Latin America
5.33
5.21

Middle East and Africa
5.14
5.02

Each region's score is based on the e-readiness scores for each of that region's countries covered in our rankings.
Source: Economist Intelligence Unit, 2008.

By the bootstraps
The gap between the "haves" and "have-nots" in our rankings narrowed again in 2008, a hopeful indication of a contraction in the digital divide between developed and developing countries. The score differential between the top and lower tiers of countries indeed fell, as it has in past years. However, the extent to which this gap narrowed was considerably less in the 2008 rankings than in previous years. (The gap between the top 20 and lower 20 fell this year to 3.43 points, a reduction of 0.21 points from 2007; the reduction last year between these groups of countries was 0.50 points.) In this sense, the latest e-readiness rankings point to a slowdown in the narrowing of the digital divide.

A closer look also reveals a widening of the gap in the lower tiers. The least e-ready countries have registered no upward movement in their rankings (although most have improved their scores), partly because their business environments have deteriorated or improved only slightly. In contrast, countries further up the scale, such as Saudi Arabia (46th), Thailand (47th) and Egypt (57th), have moved upwards mainly by improving connectivity.

Policymakers have to pull on many levers simultaneously to create an environment where digital connections can proliferate, and where citizens and businesses find it convenient, efficient and profitable to use digital channels for their transactions. This last part is the most difficult, for while it is relatively straightforward to build digital channels, it is a more complex task to get people to use them. Even when a user base is recruited, the mercurial nature of the Internet means that even a slight change can have a negative impact. Last year, for example, saw the rise and (slight) fall of Facebook, a hugely popular social networking site, and even eBay, the venerable online trader, saw protests and boycotts because of slight changes in the way it managed its relationships with members.

Digital best practice
There is no one tried and tested way to achieve e-readiness, but there are a few guiding principles that policymakers can use to evaluate the opportunities for consumers and businesses to opt in to good digital practices.

● **Let the market build it...** It has long been true that competitive telecommunications and Internet service markets are more efficient than governments in building networks and finding affordable price points for consumers. Policymakers should allow market forces to determine the course of the digital economy. Part of a government's mandate is to ensure fair access to the resources that network operators need (spectrum and rights-of-way, for example). It must resist, however, the urge to try to steer its ICT industry into technology-specific directions (as when China urged its mobile operators to adopt a domestic third-generation (3G) standard).

● **...But step in when needed**. Governments must at the same time ensure that investment finds its way to society's digital "have-nots"; rural and poor communities, for example, tend to be left behind if operators follow a purely market-driven course. This may mean that universal service obligations need to be enforced longer, or governments themselves may need to step in to fund development. Fully one-half of the world's population will have a mobile phone in 2008; carriers will certainly have to be more creative (and cheaper) if they wish to extend their business to the other half, but governments will also have to ensure that carriers have the right incentives to do so.

● **Lead by example**. Government investment in digital processes that help to improve their own operations serves two important functions when encouraging ICT use in the broader economy. First, particularly in poorer countries, governments should strive to be an early adopter of digital practices that other organisations and individuals can emulate. Second, they create demand for technology and digitally enabled services, both through their own direct purchases and through the creation of additional channels for procurement, tax filing and other operations. (Businesses are often compelled to invest in technology in order to access such channels.)

● **Don't do it all**. Governments must champion digital development, fund their own ICT infrastructure, regulate lightly and encourage others to adopt—a complex juggling act. Yet the public sector must simultaneously be as unobtrusive as possible if digital business is truly to thrive. An easy way for governments to curb their enthusiasm for influencing the outcome of digital commerce is to remain staunchly technology-neutral; that is to say, they should avoid promoting or specifying standards, makes or models of hardware and software, in either their procurement or licensing practices.

● **Keep at it**. As this year's rankings show, it is precariously easy to fall back on more strategic digital objectives, and thus lose some of the ground gained in building networks and communities. The world of e-readiness is a place with ever-shifting targets, where policy and practices must be reviewed and refreshed frequently in order to meet the aspirations of the communities that governments serve.

Economist Intelligence Unit e-readiness rankings, 2008

2008 e-readiness rank (of 70)	2007 rank	Country	2008 e-readiness score (of 10)	2007 score	2008 e-readiness rank (of 70)	2007 rank	Country	2008 e-readiness score (of 10)	2007 score
1	2	United States	8.95	8.85	36	39	Slovakia	6.06	5.84
2	4	Hong Kong	8.91	8.72	37	37	Latvia	6.03	5.88
3	2	Sweden	8.85	8.85	38	41	Lithuania	6.03	5.78
4	9	Australia	8.83	8.46	39	35	South Africa	5.95	6.10
5	1	Denmark	8.83	8.88	40	38	Mexico	5.88	5.86
6	6	Singapore	8.74	8.60	41	40	Poland	5.83	5.80
7	8	Netherlands	8.74	8.50	42	43	Brazil	5.65	5.45
8	7	United Kingdom	8.68	8.59	43	42	Turkey	5.64	5.61
9	5	Switzerland	8.67	8.61	44	44	Argentina	5.56	5.40
10	11	Austria	8.63	8.39	45	45	Romania	5.46	5.32
11	12	Norway	8.60	8.35	46	46	Saudi Arabia	5.23	5.05
12	13	Canada	8.49	8.30	47	49	Thailand	5.22	4.91
13	10	Finland	8.42	8.43	48	48	Bulgaria	5.19	5.01
14	19	Germany	8.39	8.00	49	46	Jamaica	5.17	5.05
15	16	South Korea	8.34	8.08	50	--	Trinidad & Tobago*	5.07	--
16	14	New Zealand	8.28	8.19	51	51	Peru	5.07	4.83
17	15	Bermuda	8.22	8.15	52	50	Venezuela	5.06	4.89
18	18	Japan	8.08	8.01	53	52	Jordan	5.03	4.77
19	17	Taiwan	8.05	8.05	54	54	India	4.96	4.66
20	20	Belgium	8.04	7.90	55	54	Philippines	4.90	4.66
21	21	Ireland	8.03	7.86	56	56	China	4.85	4.43
22	22	France	7.92	7.77	57	58	Egypt	4.81	4.26
23	24	Malta	7.78	7.56	58	53	Colombia	4.71	4.69
24	23	Israel	7.61	7.58	59	57	Russia	4.42	4.27
25	25	Italy	7.55	7.45	60	61	Sri Lanka	4.35	3.93
26	26	Spain	7.46	7.29	61	60	Ukraine	4.31	4.02
27	27	Portugal	7.38	7.14	62	62	Nigeria	4.25	3.92
28	28	Estonia	7.10	6.84	63	59	Ecuador	4.17	4.12
29	29	Slovenia	6.93	6.66	64	63	Pakistan	4.10	3.79
30	32	Greece	6.72	6.31	65	65	Vietnam	4.03	3.73
31	31	Czech Republic	6.68	6.32	66	64	Kazakhstan	3.89	3.78
32	30	Chile	6.57	6.47	67	66	Algeria	3.61	3.63
33	34	Hungary	6.30	6.16	68	67	Indonesia	3.59	3.39
34	36	Malaysia	6.16	5.97	69	68	Azerbaijan	3.29	3.26
35	33	United Arab Emirates	6.09	6.22	70	69	Iran	3.18	3.08

* New to the annual rankings in 2008. Note: A four-decimal score is used to determine each country's rank.
Source: Economist Intelligence Unit, 2008.

Connectivity:
Toward affordable, high-quality access for all

The Economist Intelligence Unit maintains that physical communications infrastructure—and specifically the extent to which access infrastructure reaches a majority of people—is the foundation for a country's e-readiness. The digital world continues to respond to this imperative, as there were roughly 350m broadband Internet access accounts and 1.5bn mobile subscribers on the world's networks in 2007. Portio, a communications research firm, projects that the world will reach the 50% mobile penetration rate by the middle of 2008 and hit the 75% level in less than four years' time.

Developing countries in Asia, Africa, the Middle East and eastern Europe racked up the largest gains in connectivity over the past year—not surprising given their relatively low levels of penetration. Connectivity advances in Latin America, however, were not much greater than in mature markets, suggesting the need for a reinvigorated push there to make broadband, PCs and other digital infrastructure more accessible.

The economic value that communications connectivity brings to business and individuals is substantial, as is the boon to society in terms of welfare, safety and community-building. Telecommunications and data networks are thus no longer an infrastructure component for which governments have to justify spending. Instead, thanks to the financial rewards of running such networks, private enterprises have for years built and managed telecoms operations with such enthusiasm that governments largely do not have to spend at all, even in the world's least developed economies.

This does not mean that governments have no role in ensuring that its citizens are increasingly connected to the Internet. The fact, however, that the world is a much more connected place is challenging previous conventional wisdom about what sufficient levels of connectivity should be. This landscape has been evolving for some time: the Economist Intelligence Unit earlier removed fixed-line penetration as an e-readiness metric, replacing it with broadband penetration, and last year we increased the weight of broadband density in our rankings model.

Other aspects of communications services have evolved in the past year, further affecting notions of how connectivity should grow. In other words, where once industry strategists debated where a country's natural level of market "saturation" (maximum population penetration of a service) should be, it is

**Connectivity and technology infrastructure: Top scores by region**

Region / Country	Score
North America	
United States	8.50
Canada	8.00
Western Europe	
Switzerland	9.60
Netherlands	9.20
Sweden	8.80
Asia-Pacific	
Hong Kong	9.00
Australia	8.60
South Korea, Taiwan	7.80
Central and eastern Europe	
Estonia	6.50
Slovenia	6.40
Czech Republic	5.95
Latin America	
Chile	4.50
Argentina	4.30
Mexico, Venezuela	3.70
Middle East and Africa	
Israel	7.70
United Arab Emirates	5.20
South Africa	4.55

Source: Economist Intelligence Unit, 2008.

Breakdown of e-readiness countries by broadband affordability
Number of e-readiness countries with montly DSL access costs within the given % range of median household income*.

1% or less
24

1% - 2.5%
20

2.5% - 5%
15

5% - 10%
3

10% - 20%
6

More than 20%
2
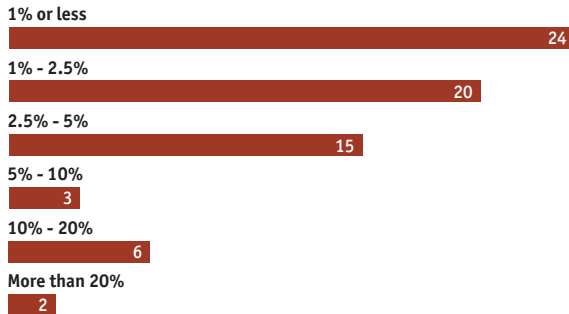
* Broadband affordability is assessed on the basis of the cost of a monthly subscription to the least expensive DSL service available in a country as a percentage of median household income.
Source: Economist Intelligence Unit, 2008.

now apparent that the urge to increase connectivity is never-ending, even for developed countries where most forms of communications services are practically ubiquitous.

Governments can push and promote, but if communications costs are not reasonable, there is little policy can do to increase connectivity. In a recent research paper, the World Dialogue on Regulation for Network Economies[1]—an international telecoms advocacy body—determines that the

affordability point of an access technology is 2.5% of average household expenditure. (This is the point at which 80% of the population owns a mobile phone with basic local services.) Applying this measure to the price of broadband access, a global trend towards greater affordability is encouragingly apparent. The number of countries in the e-readiness rankings in which the monthly cost of basic digital subscriber line (DSL) access is 2.5% or less of household income rose in the past year from 39 to 44.

There are still many markets, however, where affordable connectivity is out of reach, even when it comes to mobile telephony. Research ICT Africa! (RIA!), a regional academic network that evaluates telecoms policy, takes many African governments to task for not deregulating markets enough so that competition can bring mobile service pricing down to affordable levels. RIA! takes specific issue with fixed-to-mobile interconnection rates, which it reckons are 80-100% higher than global norms in markets such as Kenya, Benin and even South Africa, the African e-readiness leader (39th). This drives up service costs substantially for mobile users in Africa, who are predominantly poor.

The mobile data access space is fast redefining rules of competition—or rather speeding up

1. *Diversifying participation in network development*, WDR research cycle 3, 2007.

Wireless access: coming home

Ironically, one of the fastest-growing wireless access trends is not one that allows carriers to reach unserved areas, but one that adds another point of connection in an already well-served place: the home. In the age of convergence, the tiny base stations called femtocells, or "femtos", are being deployed by mobile carriers to co-exist with other customer end-point technology, such

as IPTV set-top boxes or home networking solutions, as the residence is seen as the last battle ground for market share in rich countries. Sprint, a US carrier, is already offering home base stations to its mobile customers in some cities, from which subscribers can make free local calls.

Femtos are also used as capacity and coverage boosters—they are particularly effective in urban areas by extending coverage in high-density, high-rise apartments. For the moment, however, the technology is largely part of the strategy of mobile operators in saturated markets to

win residential customers away from their fixed-line competitors, and in so doing more fully integrate mobile communications into "multi-play" bundles with TV and broadband.

Meanwhile, WiMax, a powerful broadband wireless technology once viewed as the harbinger of fixed-mobile convergence in Internet access, has seen its window of enthusiasm narrow considerably. Carriers have shelved or slowed deployment plans, and there is limited progress in bringing WiMax-ready phones and laptops to the market.

Voice over IP: an emerging-market SME opportunity

VoIP (voice over Internet protocol) was once seen as a tool for individuals and businesses to route voice over their Internet connections, circumventing traditional telecoms operators and their high long-distance costs. Today, however, the technology has been so successfully co-opted by traditional operators that many start-up VoIP carriers are struggling. As a result, VoIP's power to reduce service costs is now being harnessed by different segments, such as the development community, which is keen to employ anything that reduces telecoms costs for emerging markets and small and medium-sized enterprises (SMEs).

The Free Telephony Project is an attempt among VoIP technology developers to provide free hardware designs for Internet telephony switching systems to allow anyone to build private-branch exchanges (PBXs) and other phone systems. The project's founders hope that this will have positive developments for small businesses in the developing world.

"convergence" trends already in motion. Competition for customers, rather than policy guidance, is pushing many mobile carriers into consumers' homes in search of fixed-mobile converts. This, in turn, is pushing technology boundaries, as carriers seek to permeate every nook and cranny of the home. In 2007 femtocells were given a boost—the wireless technology essentially serves as a tiny base station extension of cellular networks, and it is designed to keep mobile customers on their mobiles when they are at home. It is seen as a clearly defined complement to other existing access technologies, and as such might prove more adaptable than other more "disruptive" technologies without as clear a niche, such as WiMax (see box on previous page).

Many of the conditions favourable to femtos also explain what hampers WiMax. Deploying femtos does not require existing operators to seek licences for new spectrum (and may actually help manage existing spectrum better), nor do customers need to get new handsets, both of which are required for WiMax. Moreover, although mobile carriers are using femtos to get customers to stay on their mobiles when at home and forgo their fixed lines, this is simply an extension of an established consumer habit. WiMax is suffering from the age-old deployment problem: it is designed to create a new service opportunity that may indeed exist, but no one knows for sure. The end result may be that WiMax gets subsumed into femtocell deployments, as is already taking place in Sprint's rollout plan.

For other markets, the connectivity imperative is more fundamental—to get basic connectivity out to underserved, usually rural or remote, destinations. As Internet access itself becomes as fundamental as voice, this remote access imperative is shifting to deliver broadband services. For example, Newtec, a Belgium-based satellite-communications technology company, is providing two-way multimedia broadband solutions to Hellas Sat, a Greek-Cypriot satellite operator, to provide broadband service to residential users in remote Greek islands.

This is not to say that government targets do not still have a role to play in expanding connectivity. In China, the government, seeing the benefit to consumers (and to industries) of broadband proliferation, has announced its intention to push DSL access into 95% of villages and townships nationwide by the end of 2008 (from the current level of 92%). The Ministry of Information Industry is also looking to roll out broadband-connected kiosks to many of the rural places that are as yet unserved.

Although investment priorities have shifted to Internet access, finding ways to increase affordable voice solutions are far from irrelevant (see box).

Business environment: Progress amid uncertainty

When measuring progress in the digital world, it is worth remembering that e-commerce is really about commerce, and that e-government is primarily about government. In other words, adding an "e" (for electronic) to a part of the economy or society does not change its nature. Similarly, the Economist Intelligence Unit considers that an integral contributor to a country's e-readiness is its overall readiness to promote and facilitate business. As in previous years, our scoring model in 2008 makes use of our existing Business Environment Rankings, which evaluate over 70 separate indicators grouped in ten categories of criteria, such as political stability, macroeconomic health and the country's overall policy towards free enterprise. Utilising these allows us to assess each country's ability to maintain a stable, secure and unfettered place to conduct commerce in the manner in which it attracts and fosters (or repels and hinders) digital commerce. The rankings for this category reflect our view of each country's expected performance in the five-year period of 2008-12.

In general, the global business environment will improve steadily over the next 3-5 years. Few countries see any substantial deterioration in their business environment scores, although there has been some slippage in high-ranking e-readiness countries such as the US, UK (8th) and Canada (12th), mainly owing to tougher macroeconomic conditions but also (in the US) to negative changes in the tax environment. Most countries are registering progress in such indicators as financing and the labour market. The most marked improvements in scores can be seen in emerging markets—notably Venezuela (52nd), India (54th), Egypt, Jordan (53rd) and Ukraine (61st)—where the room for improvement is substantial.

Business environment: Top scores by region

North America

Canada	8.63
United States	8.53

Western Europe

Denmark	8.65
Finland	8.62
Ireland	8.61

Asia-Pacific

Hong Kong	8.64
Singapore	8.64
Australia	8.59

Central and eastern Europe

Estonia	7.81
Czech Republic	7.42
Slovakia	7.42

Latin America

Chile	8.07
Mexico	7.24
Brazil	7.01

Middle East and Africa

Israel	7.65
United Arab Emirates	7.64
South Africa	6.83

Source: Economist Intelligence Unit, 2008.

This is reflective of two symbiotic trends. Most emerging economies are expending great effort to improve their investment and trade conditions in order to attract global business. As this occurs, international business has continued to look favourably upon emerging markets, where there is both stability and increased opportunities for organic growth. In the developed world, by contrast, that organic growth opportunity is less in the mature markets of Europe and North America. There are also the lingering effects of the (US-induced) sub-prime lending crisis on financial markets. In many

The swiftly tilting planet of outsourcing

Stable business environments also assist in retaining digital commerce. As in many other parts of the increasingly globalised economy, software production and call centres are highly transient industries that can readily migrate to a more favourable operational climate, and do so quickly. IT-enabled services are by their nature value-added and efficiency-enhancing, but they are also cost-sensitive. Most of the developing world's rising IT powers—countries as diverse as India and Romania (45th)—owe the existence of these industries to the labour-cost arbitrage opportunities they provide to their rich-country outsourcing clients. Change the cost equation, and much of the competitive advantage enjoyed by a country's outsourcing providers disappears. India's rapidly appreciating currency (13% against the US dollar in 2007), with salary levels increasing just as fast, has caused many of its own domestic IT services giants to look abroad for growth. For example, Satyam Computing is ramping up its software development facilities in Thailand, and Infosys is migrating many of its service centres to the Philippines (55th) and as far afield as Latin America.

rich countries, this will have a negative impact on macroeconomic growth prospects over the next two years, which is contributing to slight dips in their Business Environment scores.

Digital business may be slightly more attuned to a country's business conditions, because its nimble nature allows it to identify and exploit comparative opportunity quickly. E-business is relatively light in terms of capital investment, and fast to penetrate markets (provided, of course, that the Internet connections in a country are similarly fast). Even the more labour-intensive businesses that support digital commerce, such as call centres or knowledge management outsourcing providers, move quickly into markets where there are clear cost and skills advantages. Just as quickly, however, these industries can shift to other markets if there are rapid changes in the labour-cost, tax, financing or political environments. Kenya, for example, has been building a vibrant call-centre and back-office service industry on the Indian model, but violence and political upheaval in the wake of the recent presidential election may disrupt it, or even cause some operations to take flight.

Social and cultural environment: The knowledge to exploit technology

In order for citizens to be online, countries need them to be Internet-literate. Or rather, technology needs to accommodate their literacy levels in order to get them online. India is one country leading the world in efforts to build "e-inclusion" programmes so that citizens can increase their access to public services even if they cannot read (see box). Malaysia (34th) is approaching the challenge in a different way: MIMOS, the government's scientific laboratory, is developing a WiFi-based "Internet literacy tool" aimed at rural elderly consumers, which will deliver stripped-down Internet content via television sets.

The Economist Intelligence Unit contends that there must be appropriate levels of education and Internet familiarity for digital commerce to be viable. Linked to this is also the innovation challenge:

digitally savvy consumers and businesses form the foundation for an economy which invests in new technology ventures, and values their contributions.

The lack of appropriate skills in talent markets has become a global challenge for firms and policymakers alike: over four-fifths of senior executives in a global survey conducted recently by the Economist Intelligence Unit on behalf of Stepstone, a talent management firm, said that recruiting and retaining top talent is growing more difficult in their respective countries, and 40% said it is becoming "significantly harder"[2]. Often, firms turn to their governments for help, with interesting results: Guangda, a

Taking the mobile phone one step beyond

Biometrics, as we indicated last year, has been making inroads as a tool for governments to increase access to public services. As we also suggested, India is ahead of the curve in using biometric technology to target underserved communities—and using readily available, practical technology to do so. The Department of Rural Development in the state of Andhra Pradesh is implementing a programme where private customer-service providers issue social security payments to citizens using mobile phones loaded with banking applications, which in turn communicate with biometric smartcards via RFID (radio-frequency identification) to validate the applicants' details. The cards will soon be extended to allow holders to make other transactions such as housing payments or small farm loans.

**Social and cultural environment:
Top scores by region**

North America

United States	9.00
Canada	8.13

Western Europe

Denmark	8.67
Sweden	8.60
Finland	8.40

Asia-Pacific

Australia	9.13
New Zealand	8.47
South Korea	8.47

Central and eastern Europe

Slovenia	7.00
Czech Republic	6.87
Hungary	6.73

Latin America

Chile	6.60
Argentina	6.13
Brazil	6.13

Middle East and Africa

Israel	7.93
Turkey	6.20
United Arab Emirates	5.93

Source: Economist Intelligence Unit, 2008.

2. *Stepstone Total Talent Report 2008*, produced in co-operation with the Economist Intelligence Unit, January 2008.

E-advocacy and boycotts

The past year saw some online tectonic shifts at the fault line between commercial and social interests. While Internet users in most countries accept the implicit right of social networking sites, consumer-to-consumer (C2C) portals and other virtual communities to profit from their efforts, there are clearly limits to users' tolerance, and these were put to the test in 2007.

The self-billed social networking "application", Facebook, saw its population swell to over 42m in 2007; according to its own estimates, over 10% of the entire populations of two e-readiness leaders, Sweden (3rd) and the UK, have profiles, as do roughly 20% of the populations of Norway (11th) and Canada. Just as quickly as the Facebook population grew, however, its usage has begun to fall off—in January 2008 Nielsen, an online research firm, estimated that for the first time in 18 months Facebook's unique users in the UK dropped by 400,000. Some of this is natural stabilisation and churn of users after a rapid period of growth. However, Facebook's attempts to allow advertisers and application developers unfettered access to its users has resulted in a spam-like proliferation of messages and hoards of e-clutter, and this has also dampened enthusiasm.

Similarly, eBay has fallen on harder times of late. The world's premier C2C commerce site had been suffering owing to write-downs associated with its acquisition of Skype, a VoIP-application-turned-community developer. Yet it is facing a much greater threat to its business in the form of a widespread, grass-roots boycott by a large number of well-established online traders. The user revolt has stemmed from changes the company is making to the way its users leave feedback for each other, such as removing feedback history longer than a year, and only making it possible to leave positive feedback from (presumably satisfied) customers. This has angered many users that have invested in their high ratings over the years.

Digital commerce enablers that have leveraged online communities are finding out the hard way how important it is to incorporate those communities' needs and preferences in their business decisions.

manufacturer of laptops headquartered in Taiwan (19th), petitioned the Ministry of Economic Affairs for help in sourcing some 7,000 skilled researchers for a new R&D centre it sought to build in Taipei. The government responded by committing funds to a Guangda "branded" graduate degree programme with local universities, requiring the manufacturer to foot most of the bill for students—and commit to a 70% acceptance rate of job-seekers who completed the course of study.

Internet familiarity is growing around the world, and the Internet itself already represents a vast global community. In this way, the digital world creates yet another virtuous circle where the popularity of social networking sites such as Facebook and LinkedIn create their own utility, in that users can also use the platform to launch their own digital-enabled businesses, or disseminate technology, content and applications in highly viral, "proof-of-concept" testing environments. If the boundaries of what is considered acceptable social behaviour are crossed, however, this can also have a negative impact (see box).

As detailed in the next section, extra-governmental organisations are taking an increasingly active role in boosting e-readiness in emerging countries. Another force in society is the role of the not-for-profit sector, particularly in developing countries. Inveneo, a Silicon Valley-based systems integrator, provides low-cost hardware and software solutions (often relying on VoIP, open source and wireless access technologies) largely to African communities to set up telecoms and Internet access centres. Inveneo and its partners have set up over 100 projects in 45 countries such as Uganda, Rwanda and Burkina Faso, giving ICT access to an estimated 300,000 people.

Legal environment:
Sometimes less is more

A country's legal environment provides the basis for free and fair commerce, and the Economist Intelligence Unit maintains that what is good for the offline world is also good for the online world. The digital industry, however, needs additional legal fortification in order to support firms' ability to transact business online with valid, legally binding electronic documentation.

Just as important for policymakers and legislators is to know when additional legislation is not needed for digital business. Certainly, laws that allow trading partners to use digital signatures and e-mailed contracts as legally binding documentation, or which protect ideas as well as physical property, are useful additions to the rule books. Governments, however, must take care not to over-regulate industries. Particularly as it relates to attracting financing for new, technology-oriented ventures, once a basic legal framework for the status and rights of companies is established, the state should usually step aside.

Policymakers in Vietnam (65th), for example, an emerging economy with a fast-growing technology sector, seem to understand this. Already in possession of a literate, well-educated workforce and a burgeoning software industry, Vietnam has recently strengthened legislation around business incorporation and conducted campaigns to reduce bureaucracy and graft. This has, among other positive impacts on foreign direct investment, helped to attract the attention of a large number of venture-capital firms. Many of these, such as high-technology stalwart IDG Ventures, are specifically targeting opportunities in the digital economy. Vietnam's e-readiness scores in the legal environment, government policy and vision, and overall business environment categories have increased appreciably in 2008.

Legal environment: Top scores by region

North America

United States	9.00
Canada	9.00

Western Europe

Austria	8.60
Denmark	8.60
Ireland	8.60

Asia-Pacific

Hong Kong	9.80
Australia	9.50
New Zealand	9.50

Central and eastern Europe

Estonia	7.80
Lithuania	7.20
Czech Republic	6.90

Latin America

Chile	8.00
Brazil	7.40
Mexico	7.40

Middle East and Africa

South Africa	7.10
Israel	7.00
Nigeria	5.60

Source: Economist Intelligence Unit, 2008.

Paradoxically, while a light touch assists countries in attracting business investment, it is a firmer hand that helps those online know that their rights are being enforced. Domestic governments are increasingly stepping into the murkier corners of digital commerce to defend the intellectual property rights (IPR) of content and service companies. Unsurprisingly, many of Europe's most e-ready countries have taken up the mantle of IPR enforcement most seriously. Denmark, a long-time e-readiness leader, became the first country where an Internet service provider (ISP) was legally required to block traffic from The Pirate Bay, a popular destination

Patent challenges

Patent systems have come under increasing scrutiny in the digital world in the past year. This is particularly the case with the US patent system, as it provides the governance for much of the world's patentable intellectual property. It is also a very old system, one that, according to research from Stanford University's Hoover Institution, was grounded in the principles of commercialising discoveries, rather than protecting the creative process surrounding innovation. Thus, many in the digital world see the proposed US Patent Reform Act of 2007 as a great legislative leap into the information age. The act, if passed, would limit the ability of litigants to claim patent infringements broadly, and would seek to switch to a "first to file" system more in line with global practice. As a result, however, this threatens to weaken the position of existing patent holders under the "first to invent" system, and as such has come under international criticism, most vocally from China.

globally—and hosted in neighbouring Sweden—for facilitating file-sharing.

Increasingly, it is the access providers themselves that are being held accountable for the misdeeds of their subscribers. In the UK, the government is currently considering legislation that will implement a "three strikes" rule against broadband users who download copyrighted entertainment illegally; such a law will hold the ISP responsible for terminating the contract of a subscriber caught three times.

Government policy and vision:
A delicate balancing act

National governments have for decades been the primary advocates, funders and architects of a country's communications infrastructure. The market now largely shoulders that responsibility, but there is still much a government needs to do to sustain and improve e-readiness. Pragmatic "housekeeping" responsibilities are a big area: the state must manage and allocate the resources needed for networks to operate, such as radio frequencies or rights-of-way for cables. It must also gently manage the competitive environment to ensure that multiple operators spur each other on to provide better-quality service in their quest for market share. Governments also have to script out the digital "mission statement" for the country, articulating its objectives for the information economy. Last but not least, particularly in developing countries, it should lead the country by example, by being the country's primary early adopter of digital commerce and other platforms for enabling electronic trade and communication.

In encouraging a country's digital development, the government must play a delicate balancing act of

Government policy and vision: Top scores by region

North America

United States	9.00
Canada	8.40

Western Europe

Denmark	9.85
Austria	9.40
Sweden	9.35

Asia-Pacific

Singapore	9.25
Japan	9.05
Hong Kong	8.95

Central and eastern Europe

Estonia	6.25
Slovenia	6.10
Czech Republic	5.70

Latin America

Chile	7.10
Mexico	6.80
Brazil	6.10

Middle East and Africa

Israel	7.40
South Africa	6.45
United Arab Emirates	6.20

Source: Economist Intelligence Unit, 2008.

Exercising digital authority: Hong Kong's OG-CIO

Hong Kong has, like many e-readiness leaders, empowered a single government department to oversee both its vision for a digital economy and its practical implementation. The Office of the Government-Chief Information Officer (OG-CIO) is a policy setter and IT adviser for Hong Kong's entire government, but is also an IT department in its own right. Where possible, it attempts to serve both mandates with its actions. When individual government departments acquire IT goods and services, they do so through "standing offer agreements" established by OG-CIO, whereby Hong Kong firms can apply to be pre-approved vendors; this speeds up service delivery and fosters support for the local IT industry.

OG-CIO also co-ordinates efforts to create efficiency throughout its operations: it pushes all government departments to leverage outsourcing extensively in order to improve cost and operational performance of physical and software assets. Similarly, each government department needs to ensure that at least some of their citizen services are web-based, and they must add electronic channels to service delivery wherever possible. OG-CIO also tries to combine public e-adoption programmes through its own infrastructure projects: in its efforts to "unwire" its own operations, it is building over 350 WiFi access networks for each government building, which will also be made available as free public Internet access.

ICT for food security

The UN's Food and Agriculture Organisation (FAO) sees "e-agriculture" as a fundamental part of its efforts to increase sustainable food production practices and increase food security. These initiatives are concentrated in developing countries, and here usually in farming communities where the digital divide is particularly wide. In such areas, the FAO usually combines "appropriate technology"—increasingly, mobile phones or radios, as opposed to PC-based Internet access—with traditional communication channels (town hall notice boards, for example) in its programmes.

Several FAO-associated programmes are run in Latin America. An agricultural non-governmental organisation (NGO) in Peru (51st), Soluciones Practicas, disseminates educational podcasts digitally, but then burns them to disks when it takes them to rural radio stations for broadcasting. Based in Argentina (44th), AACREA, a civil organisation with 1,500 agriculture and livestock enterprise members that manages 2.5m hectares of production, is using online forums and other Internet-enabled ways to collect, analyse and share production data, tests and scientific procedures, as well as training materials.

gently massaging the macroeconomy through pro-digital policies and practices while effectively micro-managing their implementation. This is in order that it actually adopts technology that is useful and efficient for its constituents and its own operations. It is often useful for the government to task a single agency to play both of these roles. Hong Kong offers one example of an IT department that ensures that all equipment and services procured and installed also serve a larger policy objective (see box on previous page).

While it must be an early adopter whenever it can, the government must also ensure that the rights of citizens who cannot (or will not) adopt digital practices are not trampled on. This means that it has to remain accommodating to traditional off-line ways of providing service, at the risk of sometimes slowing its own attempts to boost efficiency.

There are risks to developing digital programmes just for the sake of it. The UK government, for example, has come under fire for "over-digitising" its healthcare service procurement process, adding complexity and reducing access to doctors in the process. Singapore (6th) has, since the 1990s, been working towards a goal of having one digital medical record for every citizen by the year 2010, to enhance public healthcare efficiency. Most of the work in this effort has not been in technology deployment, but in getting the various hospitals, healthcare providers and government departments to change significantly their administrative processes.

Governments are not the only altruistic forces promoting e-readiness in nation-states. Extra-national organisations, most notably international agencies operating under or in association with the United Nations, operate numerous e-government or e-democracy programmes around the world. Many are active in the rural sector, traditionally underserved by digital services (see box).

Governments also see themselves as key enablers of innovation in their economies. Besides funding some research and development (R&D), this role mainly entails creating the right investment climate for technology entrepreneurs, whether through supportive regulation for venture capital or through tax incentives for high-tech companies.

In Asia more than elsewhere, governments utilise the purpose-built special economic zone, or technology park, to support high-tech entrepreneurship and innovation. Many have to start, quite literally, from scratch: in India, Tamil Nadu state is looking to invest some Rs16bn (US$400m) in the public infrastructure (such as roads and drinking water) of nine IT parks across the state. However, although these projects are useful focal points for investment in IT businesses, they often do not serve their primary objective. Software production is not like shoe (or semiconductor) manufacturing: IT firms

High technology and quality of life in Dubai

For decades, Dubai has been working hard at an economic transformation that aims to move the emirate away from its dependency on oil revenue. Its successful attempt to secure a leading position as a developer of ports and logistics has been followed by an attempt to build capabilities as a world-class enabler of digital commerce. The latter effort has been pursued mainly through the work of TECOM Investment, a Dubai Holdings subsidiary that led the construction of Dubai Internet City, a 1m-sq ft office park designed to house global technology players seeking a convenient base from which to run their Middle East and Africa operations.

Convenience, as a whole, is the watchword of Dubai as a global trade entrepôt: it is an easy, tax-free and luxurious place for technology workers to live with their families; sport facilities, schools and shopping malls abound. These quality-of-life factors are a significant component of its success in attracting the world's largest technology firms; arguably, lack of good schools and after-work activities is one of the reasons that remote, isolated software parks struggle to attract young technology professionals. A distinct Silicon Valley feel permeates the park, from its ergonomic glass-and-steel offices clustered around meditative ponds, to its footpaths lit by solar-powered street lamps and WiFi access everywhere.

usually do not require large dedicated production facilities, and the programmers and engineers that staff them tend to be put off by their remote locations. Governments that consider the whole "lifestyle ecosystem", in addition to making innovation parks efficient places to do business, generally have more success, as seen in the case of Dubai (see box).

Consumer and business adoption:
Toward greater utility and use

An ecosystem of connectivity and government advocacy has to exist in order to cultivate more usage of digital services in a country. The Economist Intelligence Unit measures the factors that represent that link: public spending on ICT as an indication of the proliferation of technology in the economy as a whole, and the extent to which the tools are present for businesses and individuals to transact online. The latter involves measures not only for digital commerce portals but also the prevalence of credit cards and the extent to which governments provide information through the Internet, which allows "vital" transactions such as licence registration and tax payments to be made online.

As discussed earlier, the developed world seems to be moving towards a model of ubiquitous connectivity. More, however, is not always better in the Internet world. A recent study commissioned by an online data company, Lexis-Nexis, found that of

Consumer and business adoption: Top scores by region

North America

United States	9.50
Canada	8.85

Western Europe

Austria	9.35
United Kingdom	9.20
Norway	9.15

Asia-Pacific

Singapore	9.70
Hong Kong	9.50
South Korea	9.05

Central and eastern Europe

Slovenia	7.70
Estonia	7.60
Czech Republic	7.20

Latin America

Chile	6.40
Mexico	5.90
Argentina	5.20

Middle East and Africa

Israel	7.70
South Africa	6.35
United Arab Emirates	6.00

Source: Economist Intelligence Unit, 2008.

Digital collaboration

Collaboration refers the efforts of companies to co-operate with their partners, suppliers and customers in pursuit of specific business goals. These initiatives often involve marketing and product development, where the efforts made by consumers to educate them-selves about a company's products and services are used by the company itself to inform (and ideally influence) other customers. The use of digital technologies is central to making collaboration work.

Financial services provision is particularly ripe for collaboration initiatives, as customers increasingly use the Internet to research products, and the financial institutions can feed that back into efforts to educate their customers and themselves. Prudential Securities, for example, initiated a successful e-learning initiative that incorporated employee- and customer-generated content (such as customer reviews and comments, some recorded via web-cams) in its product education efforts.

Financial service providers have not, as yet, managed to extend this virtuous circle to their mobile services. In poor countries, mobile banking is increasingly becoming the primary channel for retail banks to reach their customers, but in rich countries, where multiple on- and off-line service delivery channels exist, replication of an entire service channel over a phone is not useful. Hong Kong-based Hang Seng Bank recognised this in its own poorly used mobile banking portal, and reduced its offering to simply stock trading and other on-the-go transaction services. For banks in particular, more may perhaps be too much.

the roughly nine hours a day that white-collar workers spend plying their trades, around seven of those are spent in some form of information gathering: research, meetings or e-mail communications. Roughly two-thirds of respondents indicated that they wanted more time for using information rather than simply organising it. Meanwhile, over 40% agreed with the notion that they were headed for a "breaking point", where they would simply not be able to use all the data available to them. One business phenomenon helping to mitigate this is the digital manifestation of collaboration, where enterprises engage consumers, partners and employees to provide information in interactive forums as a way to allow communities to better navigate through the information deluge (see box on previous page).

The fact that online commerce is both an established phenomenon and a borderless one is reflected in the emergence of crossborder attempts to provide consumer protection. EConsumer.gov is an international consumer rights group that provides online shoppers with a channel for resolving fraud complaints with retailers globally. It processed some 8,400 complaints in 2007, the majority of which were related to online scams, while 45% involved service complaints against online retailers in a country other than the one in which the shopper lived. The vast majority of complaints originated in the US, while the UK was home to by far the largest number of retailers against which complaints were made.

Conclusion:
The need for vigilance

In developed and developing economies alike, communications services are a basic need, but they must be affordable for the majority of a country's residents in order to achieve a high level of user penetration. Expansion of the user base, in turn, affords individuals and business more opportunities to do all the useful things that connectivity offers: to trade, to learn, or even simply to socialise. A supporting super-structure of laws, policies and practices that allow these things to happen in the digital world in accordance with free-market principles is the capstone of this process.

Improving on a country's e-readiness is a complex task, and maintaining it requires vigilance. The world's most digitally developed countries are already very e-ready when it comes to connectivity, but they still have room to improve as broadband technologies advance. In many other criteria, such as the will and ability to reach out to constituents through digital channels, or the ability to anticipate changes in the social and cultural environment to shift digital policy accordingly, countries can fall back and in so doing slow their e-readiness progress.

The challenge for those countries further down the rankings is greater, but as the progress shown in 2008 demonstrates, not impossible, particularly in the all-important area of improving connectivity. Moreover, thanks to globalisation, many poorer countries can seize upon the initiative of their more developed peers in two important ways. One is to continue to "plug in" to the digital economies of the rich world as they have been doing for years—IT-enabled outsourcing in particular remains a key source of investment and skills transfer.

The second is a trend that has come into sharper relief this year: the borderless digital economy is allowing those who are already e-ready to be agents of change in developing countries. Examples include socially responsible players such as Inveneo or the Free Telephony Project. They may also simply be the members of an interest group on a social networking site where, for example, homemade videos lampoon the questionable awarding of contracts to a politically connected telecoms equipment vendor. Whether helping to disseminate technology or social justice, the actions of e-readiness agents are clearly propelling the global economy forward.

Appendix 1: Methodology and category definitions

The Economist Intelligence Unit's e-readiness rankings methodology has remained largely unchanged in 2008, after substantial structural revisions were made in the previous year. It remains a holistic, multi-faceted model that attempts to measure the importance that many unique social, economic and technological factors have in determining the direction of digital development and e-commerce in a market.

The rankings model consists of nearly 100 separate quantitative and qualitative criteria, which are scored by Economist Intelligence Unit's country analysts and organised into six primary categories. These are, in turn, weighted according to their assumed importance as influencing factors. Major data sources include the Economist Intelligence Unit, Pyramid Research, the World Bank and the World Intellectual Property Organisation, among others. In addition, extensive primary research has been conducted for the second year running to compile service pricing for major ISPs, in order to build a picture of the affordability of broadband Internet services.

Three adjustments were made to the model in 2008. First, in the connectivity category, the scoring threshold for broadband penetration was raised to reflect the continuing inroads made by broadband access technologies—even in countries with already high levels of penetration, such as the Netherlands, Australia and South Korea. Second, in the social and cultural environment category, the innovation indicator has been expanded to take in trademark registration and R&D spending. Previously only patent applications were used as the proxy for a country's innovation environment. Finally, in the category of legal environment, the weight of the censorship indicator was slightly reduced in favour of that of ease of registering a new business.

The six categories (and their weights in the model) and criteria are described below.

1. Connectivity and technology infrastructure
Weight in overall score: 20%
Category description: Connectivity measures the extent to which individuals and businesses can access mobile networks and the Internet, and their ability to access digital services through means such as digital identity cards. Effective access uses two primary metrics: penetration and affordability. Penetration of each market's personal computers, mobile-phone subscriptions, wireless Internet (WiFi) hotspots, overall Internet users and broadband Internet accounts are ranked as a percentage of the total population; this "basket" of connectivity we feel now to be the optimal representation of the extent to which voice and data services are accessible to a country's residents. The affordability of the lowest-priced broadband subscription, measured as a percentage of an average household's median income, is used as the overall measure of digital service affordability. The penetration of secure Internet servers in the population is also used as a reference indicator of the extent to which reliable digital transactions can be made in each market. Finally, the commitment of the country to implementing digital identity cards is also considered as a means of determining how a country's population can access digital commerce and digital government services.

Category criteria: Broadband penetration; broadband affordability; mobile-phone penetration; Internet penetration; PC penetration; WiFi hotspot penetration; Internet security; electronic ID.

2. Business environment
Weight in overall score: 15%
Category description: In evaluating the general business climate, the Economist Intelligence Unit screens over 70 indicators to provide a comprehensive and forward view of each country's attractiveness as a trading economy and as a destination for business investment from 2008 to 2012. The criteria covers such factors as the strength of the economy, political stability, taxation, competition policy, the labour market, and openness to trade and investment. The aggregate scores of the individual indicators are grouped into nine categories, shown below. Updated quarterly as part of the Economist Intelligence Unit's Country Forecasting Service, these rankings have long offered investors an invaluable comparative index for over 60 major economies.

Category criteria: Overall political environment; macroeconomic environment; market opportunities; policy toward private enterprise; foreign investment policy; foreign trade and exchange regimes; tax regime; financing; the labour market.

3. Social and cultural environment

Weight in overall score: 15%

Category description: Literacy and basic education are preconditions to being able to utilise Internet services, but this category also considers a population's "e-literacy"—its experience using the Internet and its receptivity to it—and the technical skills of the workforce. These technical skills are evaluated by both evidence of the familiarity a country's population has with information technology applications and the extent to which its schools and governments provide the education infrastructure to engender it. Continued from previous years is an assessment of entrepreneurship, while our scoring of innovation levels in each market (measured by the number of patents and trademarks registered, as well as the level of R&D spending) evaluates how well the society fosters creative business activity that can lead to the creation of intellectual property, new products and industries.

Category criteria: Level of education and literacy; level of Internet literacy; degree of entrepreneurship; technical skills of workforce; degree of innovation.

4. Legal environment

Weight in overall score: 10%

Category description: E-business development depends both on a country's overall legal framework and specific laws governing Internet use. This category reflects those legal frameworks that have a direct impact on the use of digital technology to inform, communicate and transact business. Governments need to be forward-thinking in their creation of legal frameworks to cater to Internet commerce, digital rights management and intellectual property protection, but just as importantly they need to create a legal atmosphere that works to minimise abuses and non-competitive behaviour, including provisions covering consumer protection and legal jurisdiction. E-ready countries are those that allow businesses and individuals to move nimbly and freely, where there is little bureaucracy to interfere with the registration of a new business or restrict access to information.

Category criteria: Effectiveness of traditional legal framework; laws covering the Internet; level of censorship; ease of registering a new business.

5. Government policy and vision

Weight in overall score: 15%

Category description: E-ready governments supply their constituents—citizens and organisations—with a clear roadmap for the adoption of technology, and they lead by example in their use of technology to create efficiencies. The Economist Intelligence Unit assesses the activities of governments in this area, and their ability to lead their countries towards a digital future. Are governments employing technology to operate and provide public services with less resource investment? Are they spending on ICT to stimulate similar spending in the greater economy? Are "savings" translated into service gains for citizens? Can more people interact with, and receive information from, the government regardless of their own access to technology?

Category criteria: Government spend on ICT as a proportion of GDP; digital development strategy; e-government strategy; online procurement.

6. Consumer and business adoption

Weight in overall score: 25%

Category description: If connectivity, societal adoption, and legal and policy environments are necessary enabling platforms for e-readiness, then the actual utilisation of digital channels by people and companies is a measure of successful implementation. The Economist Intelligence Unit looks at the amount that businesses and consumers spend on accessing ICT services and their adoption levels of e-commerce. It also analyses, in each country, the availability of digital channels for accessing government services.

Category criteria: Consumer spending on information and communications technology per head; level of e-business development; degree of online commerce; availability of online public services for citizens and businesses.

Appendix 2: Category scores

Economist Intelligence Unit e-readiness rankings, 2008
Category scores

	Overall score	Connectivity	Business enviroment	Social and cultural environment	Legal environment	Government policy and vision	Consumer and business adoption
Category weight		**20%**	**15%**	**15%**	**10%**	**15%**	**25%**
United States	8.95	8.50	8.53	9.00	9.00	9.00	9.50
Hong Kong	8.91	9.00	8.64	7.47	9.80	8.95	9.50
Sweden	8.85	8.80	8.52	8.60	8.60	9.35	9.05
Australia	8.83	8.60	8.59	9.13	9.50	8.85	8.70
Denmark	8.83	8.70	8.65	8.67	8.60	9.85	8.60
Singapore	8.74	7.70	8.64	7.73	9.30	9.25	9.70
Netherlands	8.74	9.20	8.55	8.00	8.60	9.35	8.60
United Kingdom	8.68	8.30	8.61	8.13	8.60	9.00	9.20
Switzerland	8.67	9.60	8.57	8.27	8.30	8.65	8.40
Austria	8.63	8.00	8.16	8.00	8.60	9.40	9.35
Norway	8.60	8.20	8.01	8.27	8.30	9.35	9.15
Canada	8.49	8.00	8.63	8.13	9.00	8.40	8.85
Finland	8.42	7.70	8.62	8.40	8.30	9.00	8.60
Germany	8.39	8.20	8.36	8.00	8.30	8.20	8.95
South Korea	8.34	7.80	7.57	8.47	8.00	8.75	9.05
New Zealand	8.28	7.25	8.22	8.47	9.50	8.35	8.50
Bermuda	8.22	8.15	8.36	6.67	9.10	8.20	8.80
Japan	8.08	7.50	7.39	7.87	7.70	9.05	8.65
Taiwan	8.05	7.80	7.99	8.07	7.70	8.15	8.35
Belgium	8.04	7.80	8.12	7.53	8.30	8.35	8.20
Ireland	8.03	7.00	8.61	8.07	8.60	7.65	8.50
France	7.92	7.30	7.94	7.87	8.30	8.15	8.15
Malta	7.78	5.75	7.76	7.33	8.00	8.95	8.90
Israel	7.61	7.70	7.65	7.93	7.00	7.40	7.70
Italy	7.55	7.00	6.93	7.80	8.60	7.90	7.60
Spain	7.46	7.00	7.77	7.80	8.00	7.25	7.35
Portugal	7.38	6.40	7.32	7.13	8.00	7.80	7.85
Estonia	7.10	6.50	7.81	6.73	7.80	6.25	7.60
Slovenia	6.93	6.40	7.32	7.00	6.60	6.10	7.70
Greece	6.72	5.30	6.77	7.13	8.00	6.90	6.95
Czech Republic	6.68	5.95	7.42	6.87	6.90	5.70	7.20
Chile	6.57	4.50	8.07	6.60	8.00	7.10	6.40
Hungary	6.30	5.30	7.08	6.47	6.90	5.55	6.75
Malaysia	6.16	5.40	7.35	5.20	5.60	6.60	6.60
United Arab Emirates	6.09	5.20	7.64	5.93	5.50	6.45	6.00

	Overall score	Connectivity	Business enviroment	Social and cultural environment	Legal environment	Government policy and vision	Consumer and business adoption
Category weight		*20%*	*15%*	*15%*	*10%*	*15%*	*25%*
Slovakia	6.06	5.40	7.42	6.40	6.90	4.70	6.05
Latvia	6.03	5.60	7.10	6.20	6.90	4.70	6.10
Lithuania	6.03	5.00	7.09	6.33	7.20	4.70	6.35
South Africa	5.95	4.55	6.83	5.27	7.10	6.20	6.35
Mexico	5.88	3.70	7.24	5.47	7.40	6.80	5.90
Poland	5.83	5.05	7.16	6.20	6.60	4.70	5.80
Brazil	5.65	3.60	7.01	6.13	7.40	6.10	5.20
Turkey	5.64	4.40	6.60	6.20	5.40	5.75	5.75
Argentina	5.56	4.30	6.43	6.13	7.10	5.40	5.20
Romania	5.46	4.70	6.57	5.47	6.30	5.25	5.20
Saudi Arabia	5.23	4.50	6.59	5.33	5.00	6.05	4.55
Thailand	5.22	3.80	6.99	5.07	5.90	5.25	5.10
Bulgaria	5.19	4.40	6.79	5.33	6.30	4.55	4.70
Jamaica	5.17	3.80	6.21	5.33	7.40	4.75	4.90
Trinidad & Tobago	5.07	4.00	6.50	5.00	6.80	4.80	4.60
Peru	5.07	3.45	6.40	5.40	7.40	5.10	4.40
Venezuela	5.06	3.70	6.40	5.00	6.20	5.75	4.50
Jordan	5.03	4.00	6.53	5.53	5.20	5.60	4.25
India	4.96	3.40	6.53	5.33	5.10	4.95	5.00
Philippines	4.90	3.20	6.56	4.53	4.50	5.20	5.45
China	4.85	3.60	6.49	5.53	3.90	4.90	4.80
Egypt	4.81	3.40	6.36	5.20	5.20	5.45	4.25
Colombia	4.71	3.40	6.37	4.80	6.20	5.40	3.70
Russia	4.42	4.10	6.19	5.33	4.20	2.85	4.10
Sri Lanka	4.35	2.95	5.80	4.80	6.30	4.10	3.70
Ukraine	4.31	3.90	5.52	5.67	4.10	2.85	4.05
Nigeria	4.25	2.00	5.09	4.53	5.60	4.75	4.55
Ecuador	4.17	3.10	4.75	4.60	5.30	4.60	3.70
Pakistan	4.10	2.90	5.42	3.40	5.30	4.25	4.10
Vietnam	4.03	2.25	6.31	3.80	4.40	4.60	3.75
Kazakhstan	3.89	3.30	5.66	3.80	3.70	2.85	4.05
Algeria	3.61	3.60	5.36	4.33	3.40	3.20	2.45
Indonesia	3.59	2.30	6.49	3.53	3.20	3.40	3.20
Azerbaijan	3.29	2.70	5.41	3.20	2.60	2.85	3.10
Iran	3.18	3.15	4.40	4.87	2.20	2.50	2.25