Chapter 1

World e-government rankings

Progress in online service delivery continues in most countries around the world. The United Nations E-Government Survey 2012 finds that many have put in place e-government initiatives and information and communication technologies applications for the people to further enhance public sector efficiencies and streamline governance systems to support sustainable development. Among the e-government leaders, innovative technology solutions have gained special recognition as the means to revitalize lagging economic and social sectors.

The overall conclusion that emerges from the 2012 Survey in today’s recessionary world climate is that while it is important to continue with service delivery, governments must increasingly begin to rethink in terms of e-government – and e-governance – placing greater emphasis on institutional linkages between and among the tiered government structures in a bid to create synergy for inclusive sustainable development. An important aspect of this approach is to widen the scope of e-government for a transformative role of the government towards cohesive, coordinated, and integrated processes and institutions through which such sustainable development takes place.
1.1 Overview of national e-government development

The United Nations Survey 2012 assessment of progress indicates that e-government is increasingly being viewed among countries in the vanguard as going beyond service delivery towards a framework for a smart, inclusive and sustainable growth for future generations. In countries that follow that trend, a focus on institutional integration coupled with online citizen orientation in public service continues to be dominant. Both in terms of information and services, the citizen is increasingly viewed as ‘an active customer of public services’ with borrowed private sector concepts being applied to improve public sector governance systems.

A key driver for this approach is the need to achieve efficiency in government at the same time that services are being expanded. Advances in technology, which allow data sharing and efficient streamlining of cross-agency governance systems are forming the back end of integrated portals where citizens find a myriad of relevant information arranged by theme, life cycle or other preferred use. The trend towards personalization of services has gained momentum with more countries tailoring substance and presentation in accord with varied preferences. Multichannel service delivery features were found on several portals in 2012 through which the government conducted business with citizens. Citizen inclusion is also expanding both horizontally and vertically with more governments around the world in 2012 accepting and promoting the need to inform – and involve – the citizen in the public decision making process.

E-government innovation and development can position the public sector as a driver of demand for ICT infrastructure and applications in the broader economy. E-agriculture, e-trade and other fields. Accessing these new technologies for development is being recognized as one of the key sources of economic growth. Of particular importance is the effect of cellular technologies. Where national governments have taken a lead, rapid mobile technology proliferation has contributed as much as a one per cent annual increase in economic growth over the last few years.

Notwithstanding these trends, progress remains uneven. In the current recessionary climate some countries have been better able to continue to invest in ICT infrastructure and service improvement. Others are evaluating the marginal utility of such investment, especially taking into account low user uptake of existing services, and reassessing service portfolios where demand for online services is low. Many countries with low levels of infrastructure and human capital remain at lower levels of e-government development with serious issues of digital divide.

In all cases, e-government take a prominent role in shaping development making it more in tune with people’s needs and driving the whole process based on their participation.

1.2 Global leaders at a glance

Building upon the transformative nature of ICT and maintaining their focus on e-government development, all of the top 20 countries in 2012 were high-income developed economies. Of the 20, 14 are in Northern America and Europe; 3 in East Asia (Republic of Korea, Singapore and Japan); 2 in Oceania (Australia and New Zealand); and 1 in Western Asia (Israel).

While the Republic of Korea (0.9283) maintains its position as achieving the greatest e-government development, in 2012 it is followed by three European countries, with the Netherlands (0.9125) advancing by three and the United Kingdom of Great Britain and Northern Ireland (0.8960) by one to become the 2nd and 3rd leading e-ready governments in the world. Denmark (0.8889), the United States of America (0.8687), France (0.8635) and Sweden (0.8599) follow close behind among the global leaders.
The top 20 countries have marginal differences among them in the level of e-government development. All have invested, consolidated and aggregated their e-government development offerings in the last two years. Israel, Liechtenstein and Luxembourg, among the high-income countries, joined the group of world leaders in 2012.

In 2012, the United Nations e-government assessment focused on the concept of integrated services that exploit inter-linkages among different public services on a functionally and/or thematically similar one-stop-shop portal, thereby improving and facilitating citizen experience, allowing for back-office integration across governmental departments and strengthening institutional arrangements. Single sign-on integrated services on portals can organizationally transform public service delivery at both the front and the back end. They can increase functional productivity in governments by identifying and improving governance processes and mechanisms across several departments, leading to greater efficiency and effectiveness of services along with needed cost savings. With a focus on governance solutions that enhance service delivery and streamline public sector efficiency, the United Nations e-government rankings in 2012 reflect an assessment of which countries are undertaking their e-government development with a view to integrated, user-centric public service delivery.

The 2012 Survey assesses web portals with a view to the provision of e-information, e-services, which range from interactive to transactional to networked services, e-participation, and features that are the conduit for service flow from government to citizen and consequently a reflection of attention to governance processes. Indicators grouped along the four stages of the model (emerging, enhanced, transactional and connected) range from static information such as links to ministries/departments, archived information, and regional/local government services; to unidirectional government-to-citizen (G2C) information flows such as online policies, laws and regulation, reports, newsletters, and downloadable databases, among other things; to two-way financial and non-financial transactional services and advanced technical features such as mobile apps; and to integrated and participatory services characterized by an integration of government-to-government (G2G), government-to-citizen, and citizen-to-government (C2G) interactions in the last stage.

The United Nations Survey 2012 finds that models of an integrated portal differ across countries and regions. While a few countries are progressing towards one national integrated portal, others have developed their e-government offerings with a view to more than one portal, with thematic and/or functional services integrated in a manner that finds e-information separate from e-services or e-participation.

Though each of these have integrated services across various departments on the thematically or functionally portal, they nevertheless make less convenient the user search for government information, services and participation in one place. The United Nations E-Government Survey 2012 differentiates these as ‘integrated services’ from a single ‘integrated portal.’

In 2012 no country had a true single-sign-on integrated portal. The United States, Republic of Korea, Israel, Australia, Norway, Denmark, Bahrain, Qatar, United Arab Emirates and New Zealand are among the few that come close to a pure one-stop-shop portal with information, services and participation services integrated on one site.

Most countries from the European Union (EU) follow the approach of separate portals for their information, service and participation offerings. In several European countries e-government services focus on the nationally organized one-stop channel for the provision of 20 basic e-services essential to their citizens while the government-provided information forms a separate portal with information services integrated on it from across all sectors.

Lessons of experience from the assessment in 2012 indicate that more services have been integrated across sectors and agencies. While this trend is likely to continue it seems that increasingly complex public sector services in the future will be ‘cloud-based’ with service providers able to address innovation and productivity upgrades without costly investments by the government. Cloud service equips governments with greater efficiency by helping them scale up their services, including storage capacity, as it evolves. Among the main challenges for large-scale adoption of cloud-based government services are the integrity of service, data security and privacy, and regulatory environment in most countries around the world, which will need

### Table 1.1 World e-government development leaders 2012

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>E-government development index</th>
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<tbody>
<tr>
<td>1</td>
<td>Republic of Korea</td>
<td>0.9283</td>
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<tr>
<td>2</td>
<td>Netherlands</td>
<td>0.9125</td>
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<td>3</td>
<td>United Kingdom</td>
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<td>4</td>
<td>Denmark</td>
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<td>5</td>
<td>United States</td>
<td>0.8687</td>
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<tr>
<td>6</td>
<td>France</td>
<td>0.8635</td>
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<td>7</td>
<td>Sweden</td>
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<td>8</td>
<td>Norway</td>
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<td>9</td>
<td>Finland</td>
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<td>10</td>
<td>Singapore</td>
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<td>Canada</td>
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<td>12</td>
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<td>13</td>
<td>New Zealand</td>
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<td>Liechtenstein</td>
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<td>15</td>
<td>Switzerland</td>
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<td>Luxembourg</td>
<td>0.8014</td>
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<tr>
<td>20</td>
<td>Estonia</td>
<td>0.7987</td>
</tr>
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</table>
The 2012 Survey extends a special recognition to those countries with a population of over 100 million, which have made the tremendous effort to provide e-government services to their people despite the challenges they face.

Close behind the top world leaders are the 25 emerging leaders as given in figure 1.1. Among these, 16 are in Europe, 6 in Asia and 3 in the Americas. With close proximity in the e-government development index value, the leaders among this group are Austria (0.7840), Iceland (0.7835), Spain (0.7770) and Belgium (0.7718). Substantial effort was made by some countries, which is reflected in their advancement this year. Notable among these are the Russian Federation (0.7345), the United Arab Emirates (0.7344), and Saudi Arabia (0.6658), all three of which joined the emerging leaders group. Progress was also noted in the case of Italy (0.7190) and Portugal (0.7165).

It is somewhat noteworthy that the emerging leaders group includes some developing countries that have begun to catch up with higher-income countries, such as Kazakhstan (0.6844); Chile (0.6769), Malaysia (0.6703), Colombia (0.6572), Barbados (0.6566) and Cyprus (0.6508).

Many of these countries have invested considerable resources in e-government in the last few years. They have expanded infrastructure and human skills on which to build further advances in service delivery and employ the full potential of information technologies for long-term sustainable development. Some of the developing countries have found ways to leapfrog traditional development cycles by deploying mobile technology for bridging the digital divide. They have reoriented their public sector governance systems towards user-centric approaches visible on their websites through multichannel service delivery features.

As in the case of the world leaders, countries in the emerging leaders group have e-government development values close to each other, ranging from 0.6508 to 0.7840. Most of them are providing similar levels of e-services such as in the case of Cyprus, which though ranked lowest for this group, has achieved around 83 per cent of the level of e-government development of Austria, the group leader.

1.2.1 Countries with a large population

The raison d’être of the United Nations E-Government Survey is to assess whether countries are deploying e-government for inclusion-for-all.

Since each country faces a different set of factors that can help or hinder its overall progress towards e-government development, this year the United Nations Survey is extending special recognition to those countries which, with a population of over 100 million, have made a tremendous effort to provide e-government services to their people, despite the challenges they face.

Table 1.2 presents e-government development in countries with populations larger than 100 million, which have made the tremendous effort to provide e-government services to their people despite the challenges they face.
Development Index (EGDI) is constructed on a comparative basis that rates each country relative to all other Member States.

Lack of access to both ICT and education infrastructure in the developing countries is a major constraint on e-government development. Income per capita imposes another limiting factor, with lower income countries having a higher marginal cost for a dollar spent on ICT. With the economic downturn, online services are at a disadvantage in the competition for resources with safe water, rural health and basic education services. This becomes especially acute if the country has a large population and/or a large land area since e-inclusion demands that online service access and infrastructure be available to all. Large areas require greater investments in providing telecommunication infrastructure. Even with cellular technology on the move, connectivity remains a major challenge for far flung rural areas. Including a population of 200 people living in the Sahara desert denotes a high marginal cost for the government. Large populations also require greater investments in schools and functional literacy. Many developing countries continue to feel the drag of a low level of educational achievement, which pulls down the United Nations E-Government rankings.

Implicit in the concept of inclusion-for-all is that large, low income countries must exert far more effort to achieve a given level of e-government development than small, high income countries. A large country by land area, for example, must lay many more miles of fibre-optic cable than a small country to provide broadband connectivity to its citizens. Similarly, a country with a very large population must provide many more online access points — via kiosks, mobile phones, or other means — to its citizens than a country with a small population. Conversely, a country with a high income has more resources to apply to e-government development than a country with a low income.

For example, India has about 4000 times the population and about 130 times the area of Belize. Moreover, it has only about one quarter of the Gross National Income of Belize. As such, the effort required by India to provide e-government services is far greater than that of Belize.

The same is the case of China, which has about 15 times the population of Viet Nam, around 30 times the area, and some 30 per cent the income per capita. This implies that China has a lower availability of

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**Table 1.2 E-government development in largest population countries**

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resources, skill levels and connectivity, at the margin, to devote to e-government development compared to Viet Nam, and that it must put forth a greater effort to achieve a similar level of e-government development. Despite these challenges the effort made by China has translated into a higher EGDI, at 0.5359.

The converse is true too. Countries endowed with a high income per capita, a small population, and high levels of connectivity face fewer challenges. It is to be expected that with fewer constraints, their e-government development efforts will be more developed so that e-services are available to all, and that high-income developed economies will go the extra mile to deploy ICT for transformation of societies for sustainable development.

This brings into sharp focus two aspects of e-government for development. Countries with a high per capita income, an established ICT infrastructure, and high levels of human capital can easily utilize these advantages to leverage the opportunity afforded by ICT and support sustained socio-economic development. However, in some cases, they may not be doing so fully. Others with lower levels shown by key indicators no doubt need a greater effort, but also have an opportunity to leapfrog long gestation developmental cycles by adroit utilization of ICT for development.

### 1.3 Regional comparisons

Sustained integration, expansion and consolidation of government online offerings led to more than a 10 per cent increase in the world average of e-government development compared to two years ago. The region of Europe (0.7188) shows the highest e-government development followed by the Americas (0.5403).

Figure 1.4 highlights that despite considerable strides towards bridging the digital divide, infrastructure and human capital limitations in several parts of the world impinge upon the ability of governments to spread – and the citizens to partake of – the benefits of information technology in the delivery of services. With a history of high levels of functional education and widespread telephony infrastructure, Europe and the Americas as a whole remain far ahead of the rest of the world regions. Asia, which is home to around three-fifths of the world citizens, has nevertheless only around 70 per cent of the level of e-government in Europe while the level of services in Africa barely squares off at 40 per cent of those in Europe. Within any region, countries at the lower percentile of e-development do not fare well either. This is especially true of the lower income countries in both Asia and Africa. The 10 least e-ready countries in Asia have barely 37 per cent of the level of e-government in Europe while in Africa the figure is little more than 20 per cent.

What is encouraging is the worldwide trend during the last decade. Since 2003 all regions of the world have steadily improved their e-government
While some countries have advanced considerably over others, Asia as a whole progressed at a leaner rate till 2010 – almost in line with the advances in the world average – and then took off. With an almost flat curve for the period 2003-2012, e-government offerings in Africa advanced minimally, with the region as a whole still remaining least e-ready.

### 1.3.1 E-government in Africa

The key challenge for the e-government development of Africa remains the widespread lack of infrastructure and functional literacy. Despite recent expansion in mobile telephony, most countries in Africa remain at the tail end of the digital divide. These challenges have translated into a lower than world average e-government development for all sub-regions. Southern Africa (0.3934) consistently outpaces all other sub-regions. Though there has been some improvement in all sub-regions, except for Northern Africa and Middle Africa, it has been minimal, with the least e-ready sub-region being Western Africa (0.2171).

Africa has seen improvement in e-government with countries in the region looking to increase their online presence through developing websites for government ministries and agencies. Table 1.3 shows that Seychelles (0.5192) climbed several points to number one in the region in 2012 followed by Mauritius (0.5066) and South Africa (0.4869). It is notable that all of the African leaders increased their e-government development index value in 2012 but lost in comparative performance around the world, except for Kenya and Morocco, which gained in the world rankings from 124 to 119 and from 126 to 120 respectively. Tunisia (0.4833) and Egypt (0.4611) declined in rank substantially as did Cape Verde (0.4297) because their improvements did not keep pace with those of other countries around the world.
In 2012, Seychelles undertook further consolidation of infrastructure and its e-government development. Major improvements in mobile telecommunication and integration of thematic services in education, health, and finance with the national portal allowed it to improve its world ranking. Mauritius improved its offerings around 10 percent with the national portal providing facilities for services such as appointments for vehicle inspections, scholarships and work permits. Although it ranked 2nd in the Eastern Africa region, its efforts could not keep pace in comparison to peers, leading to a decline in its global ranking.

Online services of Mozambique have gained ground in attempting to consolidate all information into one complete site, though this site lacks transactional services. Integrated services across sectors, including important legislation, are available. They include obtaining an identity card, registration of motor vehicles, finding private employment recruitment agencies, and the payment of taxes, to name a few. Progress on back-office integration can be found from the linkages to the various ministries and institutions of the government. Lack of infrastructure, especially broadband, remains a critical factor impeding the e-government efforts in other countries of this region.

### Box 1.1 Seychelles leads in Eastern Africa

The Government of Seychelles took the initiative to enhance its e-government service offerings in line with an integrated and interdependent strategic approach, which focuses on ICT infrastructure, legal and regulatory framework, human resource development, ICT industry and improvements in the efficiency of the government. It aims at making “Seychelles globally competitive, with a modern ICT enabled economy and a knowledge-based Information Society where strong, efficient and sustainable improvements in social, economic, cultural, good governance and regional integration are achieved through the deployment and effective application of ICT”.

Seychelles hosts its integrated portal through its SeyGo Connect for residents, citizens and businesses which branches out into an e-services gateway, providing a one-stop-shop services ranging from thematic, sectoral, life cycle services to single sign-on tailored for the individual user.

### Table 1.4 E-government development in Eastern Africa

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Sub Regional Average | 0.3011 | 0.2782 |
World Average       | 0.4882 | 0.4406 |
sub-region such as Mozambique and Rwanda as well, despite their progress in expanding services.

The top five countries in the Middle Africa sub-region all improved their service offerings in 2011. However the marginal improvement did not translate into rank improvements on a world level, except in the case of Cameroon (0.3070). The countries of Middle Africa trailed behind other countries of the world.

Gabon (0.3687) was the sub-regional leader followed by Sao Tome and Principe (0.3327) and then Angola (0.3203). Improved features such as Twitter and Facebook on the Gabon national site indicated a move towards greater participation and inclusion of the citizen. The national website of Sao Tome and Principe, though providing mostly static information, has archived data including sectoral information on health, education and the economy.

For effective e-government to materialize, planning and organization needs to accompany resource availability and an adequate level of human and physical infrastructure on the ground.

### Table 1.5 E-government development in Middle Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
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<td>Gabon</td>
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</tr>
<tr>
<td>Sao Tome and Principe</td>
<td>0.3327</td>
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<td>Angola</td>
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<td>Cameroon</td>
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<td>Central African Republic</td>
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<td>0.1399 N/A</td>
</tr>
</tbody>
</table>

| Sub Regional Average     | 0.2492                   | 0.2603                           |
| World Average            | 0.4882                   | 0.4406                           |

### Table 1.6 E-government development in Northern Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunisia</td>
<td>0.4833</td>
<td>103 66</td>
</tr>
<tr>
<td>Egypt</td>
<td>0.4611</td>
<td>107 86</td>
</tr>
<tr>
<td>Morocco</td>
<td>0.4209</td>
<td>120 126</td>
</tr>
<tr>
<td>Algeria</td>
<td>0.3608</td>
<td>132 131</td>
</tr>
<tr>
<td>Sudan</td>
<td>0.2610</td>
<td>165 154</td>
</tr>
<tr>
<td>South Sudan</td>
<td>0.2239</td>
<td>N/A 175 N/A</td>
</tr>
<tr>
<td>Libya</td>
<td>N/A</td>
<td>0.3799 N/A</td>
</tr>
</tbody>
</table>

| Sub Regional Average | 0.3159                   | 0.3692                           |
| World Average       | 0.4882                   | 0.4406                           |

Though most countries of Northern Africa increased their e-government offerings since the last Survey, they slipped in overall world rankings this year primarily because other countries overtook them in infrastructural development, especially in mobile telephone access. Tunisia (0.4833) maintained its position as the leader of e-government in the sub-region. Morocco improved its e-government
value (0.4209) reaching 120th. Algeria increased its e-government development value by 13 per cent and maintained its global rank. Egypt did not improve much and declined to 107th. South Sudan became the 193rd United Nations Member State and at the same time came online with a world ranking of 175th. At the same time, domestic political turmoil impacted upon the virtual presence of the Government in Libya (formerly the Libyan Arab Jamahiriya), which went offline at the time of the survey assessment.

South Africa (0.4869) was the sub-regional leader, followed by Botswana (0.4186) and Namibia (0.3937). South Africa developed a solid presence covering many of the basic services and features while simultaneously developing transactional facilities and venturing into the networked presence stage. Though providing slightly higher online services than in 2010 and advances in mobile telephony, all countries in Southern Africa, except for Lesotho, fell behind due to continued low availability of infrastructure, especially for the use of broadband.

Cape Verde (0.4297) was the sub-regional leader. Although half of all countries, including Ghana (0.3159), Gambia (0.2688), Senegal (0.2673), and Liberia (0.2407) increased their offerings in 2012 all countries of the sub-region remained below the world average. Despite the

---

Table 1.7  E-government development in Southern Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>0.4869</td>
<td>101</td>
</tr>
<tr>
<td>Botswana</td>
<td>0.4186</td>
<td>121</td>
</tr>
<tr>
<td>Namibia</td>
<td>0.3937</td>
<td>123</td>
</tr>
<tr>
<td>Lesotho</td>
<td>0.3501</td>
<td>136</td>
</tr>
<tr>
<td>Swaziland</td>
<td>0.3179</td>
<td>144</td>
</tr>
</tbody>
</table>

Sub Regional Average: 0.3934 0.3505
World Average: 0.4882 0.4406

Table 1.8  E-government development in Western Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Verde</td>
<td>0.4297</td>
<td>118</td>
</tr>
<tr>
<td>Ghana</td>
<td>0.3159</td>
<td>145</td>
</tr>
<tr>
<td>Gambia</td>
<td>0.2688</td>
<td>161</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.2676</td>
<td>162</td>
</tr>
<tr>
<td>Senegal</td>
<td>0.2673</td>
<td>163</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>0.2580</td>
<td>166</td>
</tr>
<tr>
<td>Liberia</td>
<td>0.2407</td>
<td>169</td>
</tr>
<tr>
<td>Togo</td>
<td>0.2143</td>
<td>178</td>
</tr>
<tr>
<td>Benin</td>
<td>0.2064</td>
<td>179</td>
</tr>
<tr>
<td>Mauritania</td>
<td>0.1996</td>
<td>181</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>0.1945</td>
<td>182</td>
</tr>
<tr>
<td>Mali</td>
<td>0.1857</td>
<td>183</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>0.1578</td>
<td>185</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>0.1557</td>
<td>186</td>
</tr>
<tr>
<td>Nger</td>
<td>0.1119</td>
<td>188</td>
</tr>
<tr>
<td>Guinea</td>
<td>N/A</td>
<td>183</td>
</tr>
</tbody>
</table>

Sub Regional Average: 0.2171 0.2156
World Average: 0.4882 0.4406
upsurge in mobile telephony online in recent years, services in Africa remain circumscribed by lack of infrastructure.

1.3.2 E-government in the Americas

As part of their effort to advance citizen services, developed countries are paying greater attention to the concepts of an integrated government portal and the re-engineering of back-office processes in designing their e-government capabilities. E-government strategies are geared towards user-centric solutions, which serve to synergize governance processes and systems across multiple public administration domains.

As noted in figure 1.8, the sub-region of Northern America (0.8559), encompassing only the United States and Canada, is the world leader with values far higher than the world average and all other sub-regions. In 2012, all sub-regions collectively improved performance in the Americas, including the Caribbean (0.5133) and South America (0.5507).

![Figure 1.8 Regional e-government in the Americas](image)

The top ranked countries in the Americas remained the United States followed by Canada, both of which were also among the world leaders. All countries of the region improved their e-government in the past two years, which contributed to around 12 per cent improvement in the sub-regional average. The majority of the countries were also among the top 60 in world rankings.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>0.8687</td>
<td>5</td>
<td>2</td>
<td>Canada</td>
<td>0.8430</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Canada</td>
<td>0.8430</td>
<td>11</td>
<td>3</td>
<td>Chile</td>
<td>0.6769</td>
<td>39</td>
</tr>
<tr>
<td>3</td>
<td>Chile</td>
<td>0.6769</td>
<td>39</td>
<td>4</td>
<td>Colombia</td>
<td>0.6572</td>
<td>43</td>
</tr>
<tr>
<td>4</td>
<td>Colombia</td>
<td>0.6572</td>
<td>43</td>
<td>5</td>
<td>Barbados</td>
<td>0.6566</td>
<td>44</td>
</tr>
<tr>
<td>5</td>
<td>Barbados</td>
<td>0.6566</td>
<td>44</td>
<td>6</td>
<td>Antigua and Barbuda</td>
<td>0.6345</td>
<td>49</td>
</tr>
<tr>
<td>6</td>
<td>Antigua and Barbuda</td>
<td>0.6345</td>
<td>49</td>
<td>7</td>
<td>Uruguay</td>
<td>0.6315</td>
<td>50</td>
</tr>
<tr>
<td>7</td>
<td>Uruguay</td>
<td>0.6315</td>
<td>50</td>
<td>8</td>
<td>Mexico</td>
<td>0.6240</td>
<td>55</td>
</tr>
<tr>
<td>8</td>
<td>Mexico</td>
<td>0.6240</td>
<td>55</td>
<td>9</td>
<td>Argentina</td>
<td>0.6228</td>
<td>56</td>
</tr>
<tr>
<td>9</td>
<td>Argentina</td>
<td>0.6228</td>
<td>56</td>
<td>10</td>
<td>Brazil</td>
<td>0.6167</td>
<td>59</td>
</tr>
</tbody>
</table>

Regional Average 0.5403 0.4790
World Average 0.4882 0.4406

The United States was found, as before, a best practice example of an integrated portal that provides easy to navigate design and collects and consolidates all information and services for citizens in one place, including agency services at the state and local level, which vastly increases the effectiveness of user search and uptake.

Barbados (0.6566) has been and remains the sub-regional leader among the Caribbean countries in 2012 followed by Antigua and Barbuda (0.6345) and the Bahamas (0.5793). The national site of Barbados offered a user friendly approach of “channels” such as the Government Channel, Citizens &
Residents Channel, Businesses Channel, etc., making it easier for the user to find relevant information. Moving towards transactional offerings, it allowed for calculation of land taxes.

Improvements in online offerings along with investments in telecommunications and human capital allowed Antigua and Barbuda to advance to a world ranking of 49th in 2012. Similarly, in Dominica and in Grenada, substantial investments in access infrastructure, especially broadband, contributed to an advance in world rankings.

All countries of the Central America sub-region increased their offerings in 2012. Mexico (0.6240) was the leader with e-government offerings around 27 per cent higher than other countries of the sub-region. Closely following Mexico as number two in the sub-region, Panama (0.5733) improved its world ranking from 79 in 2010 to 66 in 2012. It is followed by El Salvador (0.5513) and Costa Rica (0.5397). On the other hand, even as mobile telephony increased in El Salvador, broadband and other access infrastructure remained low, impeding its online service delivery uptake. Other countries of the sub-region that improved e-services are also demonstrating that the expansion of mobile infrastructure has allowed them to complement, and indeed supplement, traditional access to narrow the digital divide.

Mexico upgraded its offerings in 2011 to include a comprehensive search service, which indexes federal, state and municipal web portals daily. With more than 400 million registries in its index, the national portal greatly expanded online services to citizens, including an open government initiative, special offerings for vulnerable groups, and a facility for the anonymous reporting of issues of concern to authorities. It allows for greater inclusion of the citizen through social media such as Twitter and Facebook and is among the select 19 per cent of world countries providing a single sign-on service.

Though Panama improved its online services, the main contributor to its advancement in this year’s rankings is the expansion of mobile infrastructure, which is becoming an affordable technology among other countries as well. Panama has one of the highest penetrations of mobile subscribers in the region. As part of its Modernization Plan, to be completed in 2014, Panama is aiming to provide free access to the Internet for all citizens.

The United States (0.8687) leads this sub-region followed closely by Canada (0.8430). Since the United Nations Survey started tracking e-government development in 2003 both countries have been among the top world leaders with integrated

Table 1.10  E-government development in the Caribbean

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>2012</th>
<th>2010</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados</td>
<td>0.6566</td>
<td>0.5714</td>
<td>44</td>
<td>40</td>
</tr>
<tr>
<td>Antigua and Barbuda</td>
<td>0.6345</td>
<td>0.5154</td>
<td>49</td>
<td>55</td>
</tr>
<tr>
<td>Bahamas</td>
<td>0.5793</td>
<td>0.4871</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>0.5731</td>
<td>0.4806</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Dominica</td>
<td>0.5561</td>
<td>0.4149</td>
<td>73</td>
<td>105</td>
</tr>
<tr>
<td>Grenada</td>
<td>0.5479</td>
<td>0.4277</td>
<td>75</td>
<td>99</td>
</tr>
<tr>
<td>Saint Kitts and Nevis</td>
<td>0.5272</td>
<td>0.4691</td>
<td>81</td>
<td>75</td>
</tr>
<tr>
<td>Saint Vincent and the Grenadines</td>
<td>0.5177</td>
<td>0.4355</td>
<td>85</td>
<td>94</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>0.5130</td>
<td>0.4557</td>
<td>89</td>
<td>84</td>
</tr>
<tr>
<td>Saint Lucia</td>
<td>0.5122</td>
<td>0.4471</td>
<td>90</td>
<td>88</td>
</tr>
<tr>
<td>Jamaica</td>
<td>0.4552</td>
<td>0.4467</td>
<td>108</td>
<td>89</td>
</tr>
<tr>
<td>Cuba</td>
<td>0.4488</td>
<td>0.4321</td>
<td>110</td>
<td>96</td>
</tr>
<tr>
<td>Haiti</td>
<td>0.1512</td>
<td>0.2074</td>
<td>187</td>
<td>169</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.5133 0.4454

World Average 0.4882 0.4406

Table 1.11  E-government development in Central America

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>2012</th>
<th>2010</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>0.6240</td>
<td>0.5150</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>Panama</td>
<td>0.5733</td>
<td>0.4619</td>
<td>66</td>
<td>79</td>
</tr>
<tr>
<td>El Salvador</td>
<td>0.5513</td>
<td>0.4700</td>
<td>74</td>
<td>73</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>0.5397</td>
<td>0.4749</td>
<td>77</td>
<td>71</td>
</tr>
<tr>
<td>Guatemala</td>
<td>0.4390</td>
<td>0.3937</td>
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<td>112</td>
</tr>
<tr>
<td>Honduras</td>
<td>0.4341</td>
<td>0.4065</td>
<td>117</td>
<td>107</td>
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<tr>
<td>Belize</td>
<td>0.3923</td>
<td>0.3513</td>
<td>124</td>
<td>120</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0.3621</td>
<td>0.3630</td>
<td>130</td>
<td>118</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.4895 0.4295

World Average 0.4882 0.4406
Box 1.3  Mexico’s alternative approach

Mexico takes an alternative approach to e-services. Its portal, simply speaking, is a search engine with integrating services that respond to users’ specific search criteria. It contains information filtering features that allow users to filter content in order to narrow down searches for specific information. The portal has the ability to filter information by image, videos or news, following the style of Google’s main filtering features, as well as being able to filter through other themes such as laws at state and federal levels. Users are also able to filter information that narrows down search results to those that are near the user. A translation feature allows users to translate their searches into the various languages that Google offers. Another feature is ‘The Government Recommends’ side-bar that suggests useful pages to users so they can quickly gain access to information.

Table 1.12  E-government development in Northern America

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>0.8687</td>
<td>0.8510 5</td>
</tr>
<tr>
<td>Canada</td>
<td>0.8430</td>
<td>0.8448 11</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.8559 0.8479

World Average 0.4882 0.4406

portals and increasingly inclusive citizen services spread across theme, functionally and now by lifecycle and events. For example, the United States e-government portal (http://www.usa.gov) comes closest to a pure integrated portal with access to interlinked searchable information from the United States Government, state governments, and local governments all in one place. Substantial back-office integration has gone into the user interface, which offers a simple convenient and easy-to-use facility for everything from government departments and agencies to verifying a social security number, getting an employer identification number, multiple online participation efforts and much more. Early recognition of the use of ICT for rolling out citizen

Table 1.13  E-government development in South America

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>0.6769</td>
<td>0.6014 39</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.6572</td>
<td>0.6125 43</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.6315</td>
<td>0.5848 50</td>
</tr>
<tr>
<td>Argentina</td>
<td>0.6228</td>
<td>0.5467 56</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.6167</td>
<td>0.5006 59</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.5585</td>
<td>0.4774 71</td>
</tr>
<tr>
<td>Peru</td>
<td>0.5230</td>
<td>0.4923 82</td>
</tr>
<tr>
<td>Ecuador</td>
<td>0.4869</td>
<td>0.4322 102</td>
</tr>
<tr>
<td>Paraguay</td>
<td>0.4802</td>
<td>0.4243 104</td>
</tr>
<tr>
<td>Bolivia (Plurinational State of)</td>
<td>0.4658</td>
<td>0.4280 106</td>
</tr>
<tr>
<td>Guyana</td>
<td>0.4549</td>
<td>0.4140 109</td>
</tr>
<tr>
<td>Suriname</td>
<td>0.4344</td>
<td>0.3283 116</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.5507 0.4869

World Average 0.4882 0.4406
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World e-government rankings

1.3.3 E-government in Asia

Asia is home to 60 per cent of humanity. With some Asian countries, including China and India, averaging around 8 to 9 per cent of the continent’s GDP, Asia as a whole continued to expand e-government services further. Investments were made horizontally to expand infrastructure, including support for broadband and mobile access, while at the same time governments reached out to provide greater online services and improve e-governance. In 2012, three of the world’s top 20 e-leaders are from Asia, and the region as a whole has a higher level of e-government development than the world average. While there has been improvement in providing e-services across the continent, some of the largest gains are found in Western Asia.

The Republic of Korea (0.9283), the world leader in e-government, is also the top performer in Asia with around double the average world e-government offerings. The 2nd slot is taken this year by Singapore (0.8474) followed by Israel (0.8100) and then Japan (0.8019). The performance of the

Box 1.4 Brazil: Expanding services

Brazil’s national portal (http://www.brasil.gov.br) has looked to further build upon its strengths by offering greater access and improvement of services to citizens and increasing transparency of government actions. The layout of the national portal is thematic with a ‘For’ section, which targets the student, worker and business person with a supplemental ‘About’ section differentiated by topics such as health, education, environment and citizenship. Government services, such as payment of income taxes, fines, utilities and application for social welfare benefits, are easily accessible in an A to Z search from the national portal, which connects users to the various ministries and government departments.

In 2012, three of the world’s top 20 e-leaders are from Asia, and the region as a whole has a higher level of e-government development than the world average.
Chapter One

United Arab Emirates (0.7344) is especially notable as it advanced 21 positions to the ranking this year of 28th globally and 5th in Asia. The rapid progress of the United Arab Emirates is a best practice case highlighting how effective e-government can help support development. With double the population and three quarters of the GDP per capita, the United Arab Emirates has achieved around the same level of online services as those offered in Norway, a global leader at the 8th position.

Commensurate with global progress, all countries of Central Asia improved their service offerings, pulling up the sub-regional average by around 17 per cent. Kazakhstan was the sub-regional leader, improving its global ranking by around eight positions in 2012.

Kazakhstan in recent years has made efforts to modernize the public sector, including technology-based reform of administrative governance systems. A parallel effort has been a focus on the use of ICT for provision of services and inclusion. As in other developing countries the acceleration of informatization is aimed at increasing the efficiency of the government and exploiting synergies towards a sustainable model of development.

Ranked 2nd in the e-government development index in Central Asia, Uzbekistan has taken slow but significant steps toward increasing its online presence with the Government Portal of the Republic of Uzbekistan.
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Though the country slipped in overall rank, it improved its services by around 13 per cent. If several years ago the website was merely informative and not at all interactive, government initiative and consequent legislative changes in 2007 and 2009 made possible a more comprehensive e-government portal. Compared to its earlier versions, the national site has added the following notable characteristics and features: effective organization of information; integrated archived information (laws, policies, etc.); an increased number of ministries linked to the portal; technical and web design features (RSS, audio, video, language, etc.) and static online downloadable forms.

Box 1.6  
World leader in e-government development 2012: Republic of Korea

The Government’s main website has developed into an integrated portal where citizens can find almost every service they want, on both national and local level. The main government portal is a gateway to services through multiple channels, by theme and subjects; citizens can also have a customized channel by inputting their own age, gender and services of interest. Back-office integration across many departments brings together a powerful search engine offering advanced categorizing function, which can list results by websites, services, and news, including at the local level.

A key reason for continued leadership in world e-government progress is significant development and provision of downloadable mobile applications that are available from its national portal. The cross sector mobile apps for citizens are both iPhone and Android compatible including for e-Learning, which allows students to learn on their mobile phone in areas such as social studies, math and English. For employment opportunities, Jobcast provides information on availability of jobs in the Republic of Korea along with the relevant legislation governing labour.

Box 1.5  
Integrated services in Kazakhstan

The official homepage provides more than 1300 codes, laws, decrees, and orders with all legislation integrated into the main site. Each e-service has several icons stating whether this service can be paid online or obtained through electronic signature. There are other convenient sites such as ePay (http://www.epay.gov.kz) and eLicense (http://www.elicense.kz) where you can get specific services and payments. Another site, (http://www.goszakup.gov.kz), offers participation online in almost all procurement procedures. The main driver behind the improvement in services is the electronic public procurement portal featuring digitization of 59 e-services of state bodies, the e-license database, frequent open public web conferences, often with the with active participation of high-level government officials, and blog platforms in many ministries and agencies.
Among others, China has made steady progress in overall e-government development. This is no small feat since it is a country of 1.2 billion people and a large land mass – both of which require more effort from the government, especially if the population is widely dispersed, than would a country with a small population living within a limited area. China has enhanced the quality of its government portal by providing comprehensive information, more integrated services across different sectors, and interactions between government officials and citizens.

One thing worth mentioning is China’s endeavour to promote the open government initiative. In order to improve transparency, there is a separate section on the government’s main portal that enables citizens to search for and refer to archived policy documents and notifications of different sectors.

China has been making efforts to improve the level of its Government portal by providing comprehensive information, more integrated services of different sectors, and interactions between government officials and citizens.

### Table 1.16  E-government development in Eastern Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2010</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>0.9283</td>
<td>0.8785</td>
</tr>
<tr>
<td>Japan</td>
<td>0.8019</td>
<td>0.7152</td>
</tr>
<tr>
<td>Mongolia</td>
<td>0.5443</td>
<td>0.5243</td>
</tr>
<tr>
<td>China</td>
<td>0.5359</td>
<td>0.4700</td>
</tr>
<tr>
<td>Dem. People’s Rep. of Korea</td>
<td>0.3616</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Sub Regional Average | 0.6344 | 0.6470 |
World Average        | 0.4882 | 0.4406 |

### Box 1.8  India looks to sustainable development by including all

In addition to the national portal, the Government has also developed an India Development Gateway. This is ‘the National portal of India developed as a single-window access to information and services, with the specific objective of reaching the ‘un-reached’ rural communities of India, especially women and the poor. It catalyzes the use of ICT tools for knowledge sharing, leading to development.” (http://www.indg.in/india/about-c-dac/view?set_language=en). A variant of the National Portal, but targeted towards a specific group of people, this site contains specific topics aimed at the rural poor: agriculture, rural energy, etc., and features forum discussions and an “ask an expert” section. Making it available in English and in eight local dialects, the government’s main objective is to stimulate women, the poor, and people in the remote rural areas to use technology to their own advantage.
into low service provision and user uptake for the majority of the populations of India, Bangladesh, Bhutan, Pakistan and Nepal, with e-government development levels ranging from 0.2664 to 0.3829.

Maldives (0.4994) leads in the sub-region followed by the Islamic Republic of Iran (0.4876) and then Sri Lanka (0.4357). Service provision in Maldives builds on providing easy access to information to citizens and businesses. Through an ‘I Want To’ section organized by theme and life cycle, users can find information on service procedures, including how to obtain driver licenses, obtain ID cards and register vehicles. The national site of the Islamic Republic of Iran is available in two languages: Persian and English. Transactional service offerings in the Islamic Republic of Iran are joint public-private partnerships with some available online but also through banks and other local and national institutions.

Table 1.17  E-government development in Southern Asia

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maldives</td>
<td>0.4994</td>
<td>0.4392</td>
<td>95</td>
<td>92</td>
</tr>
<tr>
<td>Iran (Islamic Republic of)</td>
<td>0.4876</td>
<td>0.4234</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>0.4357</td>
<td>0.3995</td>
<td>115</td>
<td>111</td>
</tr>
<tr>
<td>India</td>
<td>0.3829</td>
<td>0.3567</td>
<td>125</td>
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<tr>
<td>Bangladesh</td>
<td>0.2991</td>
<td>0.3028</td>
<td>150</td>
<td>134</td>
</tr>
<tr>
<td>Bhutan</td>
<td>0.2942</td>
<td>0.2598</td>
<td>152</td>
<td>152</td>
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<tr>
<td>Pakistan</td>
<td>0.2823</td>
<td>0.2755</td>
<td>156</td>
<td>146</td>
</tr>
<tr>
<td>Nepal</td>
<td>0.2664</td>
<td>0.2568</td>
<td>164</td>
<td>153</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>0.1701</td>
<td>0.2098</td>
<td>184</td>
<td>168</td>
</tr>
<tr>
<td>Sub Regional Average</td>
<td>0.3464</td>
<td>0.3248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Average</td>
<td>0.4882</td>
<td>0.4406</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Box 1.9  Pakistan in the forefront of e-passport

In Pakistan, the Ministry of Interior and the National Database and Registration Authority (NADRA) have introduced a chip-based e-passport that would help further secure the identity of the citizens, making Pakistan one of the first countries in the world to issue the Multi-biometric e-Passport compliant with ICAO standards. The e-Passport solution uses security features on the data page supported by sophisticated technology and business logic, which makes it one of the most modern passports of this era. NADRA has already issued the passports to millions of Pakistani citizens.

Box 1.10  Singapore in the vanguard of countries

Singapore is among the leaders in the use of private cloud computing for leveraging ICT infrastructure and services. In September 2009, it became the first government in Asia to equip all its teachers with Web 2.0 communication and collaboration tools under an open standard cloud platform. Singapore’s citizen’s portal provides an extensive range of online payment services that lists by agency as well as bill type. Payments range from taxes, fees, fines and licenses that can be made through multichannels such as credit card, direct debit as well as internet banking and even by phone.
With 1.2 billion people and challenges associated with a large population, e-services in India are in the formative stage. The Government of India has made substantial efforts in the last few years to overcome the challenges, including that of connectivity to its 70 per cent rural population. Looking towards sustainable growth the government has announced that Rural Broadband Connectivity to all 250,000 Panchayats (local governments) in the country will be provided in three years to bridge the digital divide.7

Other countries in the sub-region such as Pakistan are also providing more e-services. In line with the Government of Pakistan’s policy to digitize e-services, the Multi-biometric e-Passport project aims at improving transparency in the public sphere.

Tenth in the world ranking, Singapore (0.8474) is the leader in the South Eastern Asia region and a best practice example. It is among Table 1.18 E-government development in South-Eastern Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>0.8474</td>
<td>10</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.6703</td>
<td>40</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>0.6250</td>
<td>54</td>
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<tr>
<td>Viet Nam</td>
<td>0.5217</td>
<td>83</td>
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<tr>
<td>Philippines</td>
<td>0.5130</td>
<td>88</td>
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<tr>
<td>Thailand</td>
<td>0.5093</td>
<td>92</td>
</tr>
<tr>
<td>Indonesia</td>
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</tr>
<tr>
<td>Lao People’s Dem. Rep.</td>
<td>0.2935</td>
<td>153</td>
</tr>
<tr>
<td>Cambodia</td>
<td>0.2902</td>
<td>155</td>
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<tr>
<td>Myanmar</td>
<td>0.2703</td>
<td>160</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>0.2365</td>
<td>170</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.4793 0.4250
World Average 0.4882 0.4406

Box 1.12 Saudi Arabia offers innovative e-services

A big development in the Saudi e-services is the eDashboard portal, which verifies the identity of the citizen (Digital Verification) and serves as a single sign-on portal where citizens can access all services provided. The Saudi Government also offers an Open Data Initiative, which provides citizens with documents and reports from ministries and government agencies, all publicly available. It encourages e-participation to gather public opinion through surveys, public consultations and blogs.
Chapter One

World e-government rankings


Box 1.13 Qatar’s Hukoomi: Working towards integration

Hukoomi, Qatar’s official government gateway that integrates government services, programmes and initiatives. Among its goals are to improve efficiency, responsiveness to users and accessible to all. Accessible through the Internet as well as a mobile device, Hukoomi integrates back-office processes to allow easy access to over 100 topics and articles with detailed information about Qatari law and society. The portal provides direct links to sub-portals, such as on the employment and recruitment service and e-tendering; and links to application forms from a wide range of government ministries, agencies and public services.9

Table 1.19 E-government development in Western Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israel</td>
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<td>16</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>0.7344</td>
<td>28</td>
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<tr>
<td>Bahrain</td>
<td>0.6946</td>
<td>36</td>
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<tr>
<td>Saudi Arabia</td>
<td>0.6658</td>
<td>41</td>
</tr>
<tr>
<td>Cyprus</td>
<td>0.6508</td>
<td>45</td>
</tr>
<tr>
<td>Qatar</td>
<td>0.6405</td>
<td>48</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.5960</td>
<td>63</td>
</tr>
<tr>
<td>Oman</td>
<td>0.5944</td>
<td>64</td>
</tr>
<tr>
<td>Georgia</td>
<td>0.5563</td>
<td>72</td>
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<tr>
<td>Turkey</td>
<td>0.5281</td>
<td>80</td>
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<tr>
<td>Lebanon</td>
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<td>87</td>
</tr>
<tr>
<td>Armenia</td>
<td>0.4997</td>
<td>94</td>
</tr>
<tr>
<td>Azerbaijan</td>
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<td>96</td>
</tr>
<tr>
<td>Jordan</td>
<td>0.4884</td>
<td>98</td>
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<tr>
<td>Syrian Arab Republic</td>
<td>0.3705</td>
<td>128</td>
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<tr>
<td>Iraq</td>
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<td>137</td>
</tr>
<tr>
<td>Yemen</td>
<td>0.2472</td>
<td>167</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.5547 0.4732

World Average 0.4882 0.4406

the vanguard countries employing advanced technology for innovative future solutions, organizing information in a seamless structured and user-targeted manner. Malaysia (0.6703) continues to be the 2nd leading country in the South-Eastern Asia region in 2012, not least because of its impressive service provision through an A-Z topics section as well as a life cycle feature targeting the user as a child, teenager, adult or elderly person. An impressive national health portal, MyHealth, uses ICT to inform citizens on health issues in Malaysia.

Like other leading countries, the key to the advancement of Israel, the leader in Western Asia, is its integrated approach to e-government development. Israel has added 10 points to its ranking, advancing from 26th position in 2010 to 16th in 2012.

Close behind are Saudi Arabia (0.6658) and Qatar (0.6405), both of which have undertaken to expand citizen centric services as reflected in their notable performance, which raised their global rankings to 41st and 48th respectively. The principle goals of the Saudi Arabian e-government offerings are to raise the productivity and efficiency of the public sector, increase the return on investment in ICT and provide easy-to-use, timely accurate services. A separate e-payment portal has been developed through which citizens are able to handle all online transactions.

In accordance with the strategy of the Supreme Council of Information and Communication Technology (ictQATAR), Qatar developed a strategic plan for the implementation of an integrated government programme. The plan aims to provide an enabling ICT environment through legislation, policies, guidelines and standards, such as the e-commerce policy, security policy, and data protection policy. It addresses ICT ‘readiness’ by offering e-services through a unified system of government networks; provides a centralized, secure, government data centre and a payment platform; and seeks
to improve ‘usage’ by increasing the number of e-services such as businesses’ registration, visa services and resident permits. Hukoomi, the national portal of Qatar, integrates back-office processes to allow easy access to over 100 topics and articles with detailed information about Qatari law and society. Online services available include, among others, payment for utilities, renewal of health cards, settlement of traffic violations, visa applications, and licenses.

1.3.4 E-government in Europe

Europe as a region has been in the vanguard of information technology and setting the pace for others to follow. Building on the existing strength of high levels of human capital and infrastructure, the transformative role of ICT has been recognized and adopted to further streamline e-government services. Moving beyond improving public sector efficiency, Europe is now looking to adapt innovative technologies to human development and economic sustainability in the future.

With a common e-government framework, EU countries are encouraged to deploy advanced technologies, institute better governance and provide expanded services with concomitant pursuit of greater transparency, efficiency and inclusion. Notwithstanding, differences remain between regions and within them. Key European countries spend more than double the EU average amount per capita on ICT; others, around half of it.

The Netherlands (0.9125) made substantial gains, advancing to the top position in Europe and 2nd in world rankings, followed by the United Kingdom (0.8960) in 3rd place and Denmark (0.8889), which also advanced and occupies the 4th place in the world.

The European region has the highest level of e-government development, which is around 50 per cent higher than that of the world as a whole. Western and Northern Europe offer the most online services but considerable gains were made by Southern and Eastern Europe as well in 2012.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Netherlands</td>
<td>0.9125</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>United Kingdom</td>
<td>0.8960</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Denmark</td>
<td>0.8889</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>France</td>
<td>0.8635</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Sweden</td>
<td>0.8599</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Norway</td>
<td>0.8593</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>Finland</td>
<td>0.8505</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>Liechtenstein</td>
<td>0.8264</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>Switzerland</td>
<td>0.8134</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>Germany</td>
<td>0.8079</td>
<td>17</td>
</tr>
</tbody>
</table>

Regional Average | 0.7113 | 19 |
World Average | 0.4882 | 23 |

Moving from improving public sector efficiency, Europe looks to take this role further in adapting innovative technologies to human development and economic sustainability in the future.

The Netherlands (0.9125) made substantial gains, advancing to the top position in Europe and 2nd in world rankings, followed by the United Kingdom (0.8960) in 3rd place and Denmark (0.8889), which also advanced and occupies the
Box 1.14 EU leads the way to innovative application of ICT to sustainable development

Europe 2020, EU’s growth strategy for the coming decade, involves an innovative use of technology to challenges of economic growth, employment, education, social inclusion and climate/energy. Expanding the reach, EU countries are looking towards ICT as the key enabling technology to underpin future development in the region.

The EU Member States have earmarked a total of € 9.1 billion for funding ICT over the duration of the Seventh Framework Programme.9 One of the three Flagship Initiatives to achieve Smart Growth in Europe 2020 is the Digital agenda for Europe, a blueprint for creating a single digital market based on fast or ultra-fast internet and interoperable applications. Targets include:

- By 2013: broadband access for all by 2020: access for all to much higher Internet speeds (30 Mbps or above)
- By 2020: 50 per cent more European households with Internet connections above 100 Mbps.

The strategy for the near future aims at development of common platforms and reference architectures, interoperability and data exchange standards in order to build a competitive advantage in technology solutions, which will yield high value added.

Table 1.21 E-government development in Eastern Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Federation</td>
<td>0.7345</td>
<td>27</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.7201</td>
<td>31</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.6491</td>
<td>46</td>
</tr>
<tr>
<td>Poland</td>
<td>0.6441</td>
<td>47</td>
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<td>Slovakia</td>
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</tr>
<tr>
<td>Bulgaria</td>
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<td>Belarus</td>
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<tr>
<td>Romania</td>
<td>0.6060</td>
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<tr>
<td>Ukraine</td>
<td>0.5653</td>
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</tr>
<tr>
<td>Republic of Moldova</td>
<td>0.5626</td>
<td>69</td>
</tr>
</tbody>
</table>

Sub Regional Average 0.6333 0.5449
World Average 0.4882 0.4406

4th position this year. Within the aforementioned common e-government framework, all of the top countries of Europe offered more or less the same level of user centric services to their citizens resulting in marginal assessment difference among them. For example, Germany (0.8079), the 10th leading country in Europe as a whole, achieved about 89 per cent of the e-government development level of the regional leader, the Netherlands.

Advancing 32 positions in the world rankings, the Russian Federation (0.7345) became the leader in Eastern Europe followed by Hungary (0.7201) and the Czech Republic (0.6491).

As in other parts of Europe, all countries of the sub-region improved their e-government development in 2012, advancing the sub-regional average by 16 per cent even though they could not maintain their rankings, except for Belarus and the Russian Federation. Being the largest country in the world and consisting of eight federal districts influences the development of e-government in the Russian Federation. The Government recently announced investments of around 80 billion rubles for the informatization of federal government bodies and other initiatives related to the development of e-government. In Hungary, the focus of programmes to develop the information society encompassed support for improving ICT skills in the labour market, targeting small and medium enterprises and increasing the number of ICT experts.

E-services were increasingly the norm in other countries as well. In 2010, Moldova, another country that improved its ranking, in collaboration with the World Bank, started implementation of a Strategic Programme for Technological Modernization of the Government, aimed at ICT-led
institutional reform to increase access to information and promote digital services (e-services), and to improve public administration. By improving the governance frameworks the programme is expected to result in simplification and consolidation of administrative procedures leading to transparency and effectiveness.

Six out of ten countries of Northern Europe were among the world leaders. Number three in the world, United Kingdom (0.8960) was the leader in Northern Europe followed by Denmark (0.8889 – 4th) and Sweden (0.8599 – 7th). The focus on integration of back-office departments for improvement of user interface is evident in the integrated services on the United Kingdom’s DirectGov (http://www.direct.gov.uk), which provides a one-stop-shop for all government information and services. Its comprehensive ‘Do It Online’ page lists all public services, forms, tools and transactions that the government provides in a user-friendly manner. The Jobcentre Plus page located on the portal allows citizens to search one of the United Kingdom’s largest online databases of job vacancies.

With a focus on service delivery, government national portals are organized according to domains in most of the EU countries. Denmark’s overall strategy appears to go well beyond simply providing a single portal. Rather, it seems to be focusing on multiple entry points to government based on various interest groups and constituencies. Early adoption of online transactional services has resulted in substantial cost efficiencies. In Denmark, for example, electronic invoicing saves taxpayers €150 million and businesses €50 million a year. According to one estimate, similar efforts all across the EU would result in annual savings of around €50 billion.10

In Northern Europe, the progress of Finland was especially noteworthy as it gained 10 positions to rank 9th in the world. The National Knowledge Society Strategy 2007-2015 in Finland focuses on the provision of multichannel, interactive e-services together with interoperability of information systems in the public administration. The suomi.fi (http://www.suomi.fi/suomifi/suomi) portal provides a single access point to online public services offered from both state and local authorities, organized around daily life events.
Some other Northern European countries also fortified their e-services, providing greater access and inclusion to citizens. Though they did not maintain their global ranking, other countries such as Lithuania (0.7333 – 29th), Ireland (0.7149 – 34th), and Latvia (0.6604 – 42nd) also improved e-government applications, networking, and other web services. The e-government gateway of Lithuania (http://www.ep-aslaugos.lt) has been developed under the auspices of the Information Society Development Committee for the purpose of providing seamless public administration services and information to residents and business. Covering content in both the Lithuanian and English languages, the gateway provides 211 first-level public services, 167 second-level services, 33 third-level services and 12 fourth-level services.11

The one-stop-shop portal of Ireland approaches the delivery of e-services in such a way that enables users to tailor those services to their needs at a place and time that suits them, together with an overview of the extent of public services online. Latvia’s one-stop-shop portal (https://www.latvija.lv) offers 29 e-services and online banking (e-payments). Points of Single Contact allow service providers to obtain information through a single entry point and complete required administrative procedures electronically in order to commence provision of services in a chosen business sector in Latvia. An advanced users authorization system through bank or ID cards ensures users privacy and security. The online banking system allows users to employ the system more efficiently and securely (e.g., for income tax declaration).

Even though its global ranking dropped, Spain (0.7770) remained the leader in Southern Europe, followed by Slovenia at 25th and Croatia at 30th in world rankings. The national site of Spain is available for the user in five languages with information services and easy-to-navigate features. In Slovenia the public sector reforms have included digitization of governance processes and services for improved functioning. The State portal of the Government of Slovenia (http://e-uprava.gov.si) organizes information to citizens by links to 18 life event categories such as work and employment, health and social affairs, personal finance and taxes, environment, education and youth, and social welfare so that information on government services can be easily and quickly accessible.

<table>
<thead>
<tr>
<th>Table 1.23 E-government development in Southern Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>Slovenia</td>
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<tr>
<td>Croatia</td>
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<tr>
<td>Italy</td>
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<tr>
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<td>Serbia</td>
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<td>San Marino</td>
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<td>Montenegro</td>
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<tr>
<td>Andorra</td>
</tr>
<tr>
<td>Bosnia</td>
</tr>
<tr>
<td>Albania</td>
</tr>
</tbody>
</table>

| Sub Regional Average | 0.6574 | 0.5566 |
| World Average       | 0.4882 | 0.4406 |

Among other countries that increased their world rankings are Italy, Portugal, Greece and Serbia. Particularly notable is Serbia’s performance, which advanced 30 positions to arrive at 51st in the world rankings. In Serbia, the Digital Agenda Authority is
responsible for introducing online services to improve economic efficiency and citizens’ quality of life, and for implementing e-government in accordance with a ‘one-stop-shop’ principle. Among other initiatives, the Authority created Serbia’s e-services portal, eU-prava (http://www.euprava.gov.rs), which aggregates services and information from more than 27 governmental authorities, including municipal authorities.

Of the countries of the region which are global leaders, several offered examples of best practice. In the Netherlands, efficiency and citizen inclusion are the objectives of the e-government strategy. Integration of a back-office management system has been undertaken with a belief that citizens should provide information once. The government is building an e-government infrastructure encompassing citizen access to government processes including electronic authentication, uniform identification numbers for both citizens and businesses and electronic personal identification. As part of its broader ICT strategy the focus of e-government in the Netherlands was on improving efficiency of services concomitant with reduction of administrative cost and burden.

Based on extensive technological infrastructure, the recently concluded National Implementation Programme (NUP) for Better Services and e-Government laid out agreements among the national government, provinces, and municipalities to improve service delivery. Its high levels of broadband connectivity ensured further enhancements in e-services undertaken during the last few years.

Luxembourg’s services portal (http://www.guichet.public.lu/fr/citoyens/index.html) is helping to simplify the citizens’ interaction with government by providing a quick and easy access to all information and services by public bodies to citizens and businesses and it allows users to use the electronic signature LuxTrust.

<table>
<thead>
<tr>
<th>Table 1.25 E-government development in Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td></td>
</tr>
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<tr>
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<tr>
<td>Samoa</td>
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<tr>
<td>Micronesia (Federated States of)</td>
</tr>
<tr>
<td>Tuvalu</td>
</tr>
<tr>
<td>Vanuatu</td>
</tr>
<tr>
<td>Nauru</td>
</tr>
<tr>
<td>Marshall Islands</td>
</tr>
<tr>
<td>Kiribati</td>
</tr>
<tr>
<td>Solomon Islands</td>
</tr>
<tr>
<td>Papua New Guinea</td>
</tr>
</tbody>
</table>

| Sub Regional Average | 0.4240 | 0.4193 |
| World Average | 0.4882 | 0.4406 |

### 1.3.5 E-government in Oceania

Two of the world leaders – Australia and New Zealand – outpace others in the region. With many countries in the range of 113–177 in global rankings, the region as a whole scored around 13 per cent less than the world average.
Chapter One
World e-government rankings

Australia continues to be the leader in the Oceania region. The national portal (http://australia.gov.au) acts as a one-stop-shop that connects citizens to the information and services of around 900 government websites and state and territory resources. Information can be quickly and easily accessed through the ‘People’ and ‘Topics’ sections, which categorically filter specific content while the ‘Services’ section allows citizens to perform many functions such as making payments for taxes, driver license renewals, vehicle and business registrations, lodging online forms and making online inquiries. The integrated portal of the Government of New Zealand provides a one-stop-shop portal for information, images and resources from all New Zealand government agencies and government funded sites.

### 1.4 Least developed countries

The least developed countries (LDCs) group was led by Samoa (0.4358) at 114th place, followed by Tuvalu (0.3539) which, at 134th, made considerable progress since 2010. Notable advances were also made by Vanuatu (0.3512) and Rwanda (0.3291), which moved up to 135th and 140th, respectively. Overall, the LDCs remain hampered by a lack of infrastructure, both physical and human. Despite advances in mobile communication lack of functional skills limit user uptake.

Though there is considerable progress in the expansion of online services, one of the primary challenges that remains in LDC’s is integration of back-end processes with efficient, user-friendly, and target-oriented services delivery.

<table>
<thead>
<tr>
<th>Country</th>
<th>E-gov. development index</th>
<th>World e-gov. development ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samoa</td>
<td>0.4358</td>
<td>114</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>0.3539</td>
<td>134</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>0.3512</td>
<td>135</td>
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<tr>
<td>Lesotho</td>
<td>0.3501</td>
<td>136</td>
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<tr>
<td>Sao Tome and Principe</td>
<td>0.3327</td>
<td>138</td>
</tr>
<tr>
<td>United Rep. of Tanzania</td>
<td>0.3311</td>
<td>139</td>
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<tr>
<td>Rwanda</td>
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<td>Democratic Republic of the Congo</td>
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<tr>
<td>Djibouti</td>
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<td>Eritrea</td>
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<td>Guinea Bissau</td>
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<tr>
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<tr>
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</tr>
</tbody>
</table>
1.5 Post-conflict countries

Post-conflict situations are associated with weak and fragile states where legitimacy and governance are ineffective and services non-existent. As a special case, in table 1.27 the 2012 Survey presents e-government development in a few select countries that have witnessed conflict in the past decades. For the definition of post-conflict countries, please refer to the United Nations Development Programme’s Crisis Prevention and Recovery Report 2008, available online.13

1.6 Conclusion

In conclusion, the 2012 Survey finds that Member States have begun to move from a decentralized single-purpose organization model of e-government to an integrated unified whole-of-government model for the people. This approach supports the strengthening of institutional linkages with interconnected departments and divisions; greater efficiency and effectiveness of governance systems; and better public service delivery. However, the efforts of countries at all levels of development are still affected by a lack of integration of administrative simplification with e-government development plans, lack of infrastructure and human resource capacity and a gap between e-services supply and demand. Low-income countries, in particular, continue to contend with traditional barriers to ICT investment such as lack of technical skills, high costs of technology, and ineffective government regulation.15