Egypt at a Crossroads
How the Internet Is Transforming Egypt’s Economy
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EGYPT AT A CROSSROADS

HOW THE INTERNET IS TRANSFORMING EGYPT’S ECONOMY

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Since its conception, the Internet has been analyzed and studied in great depth. Yet its economic impact, and in particular its contribution to a country’s economy, is challenging to quantify. In order to understand the nature and size of commercial activity on the Internet in Egypt, Google Egypt commissioned The Boston Consulting Group (BCG) to prepare this independent report. The results have been discussed with Google executives, but BCG is responsible for the analysis and conclusions.

Both Google Egypt and BCG are pleased to present these findings in order to foster a better understanding of how the Internet helps power Egypt’s economy.
EGYPT HAS THE LARGEST population of Internet users—31 million in July 2012—in the Middle East and North Africa. The country was beginning to embrace the Internet prior to the overthrow of the Mubarak regime in early 2011. Indeed, the Internet—especially social media—is viewed by some as having a role in the events of the revolution. But the Internet is beginning to transform the economy too, even though measuring its overall impact is not straightforward. This report aims to describe and quantify that transformation, focusing on the benefit of Egypt’s growing Internet economy and the key success factors for Egypt’s future economic growth.

In 2011, the Internet contributed an estimated £15.6 billion, or 1.1 percent of GDP, to the Egyptian economy.

- The Internet’s share of Egypt’s GDP (“e-GDP”) is comparable to several other sectors, including health services (1.3 percent), education (1.1 percent), and oil refining (1.1 percent). However, it is smaller than such sectors as restaurants and hotels (3.2 percent), wholesale and retail trade (11.5 percent), and commodities (14.9 percent).

- The Internet’s contribution to Egypt’s economy has been fueled by innovation and entrepreneurship, prompting investments by individuals and private companies as well as government investment in infrastructure and on access to the Internet.

- Today, in Egypt, consumers’ combined purchases on the Internet and spending to access the Internet make up just 50 percent of e-GDP, compared with 59 percent in Saudi Arabia, 71 percent in Turkey, and 72 percent across the EU-27. As this spending increases, we expect the Internet’s contribution to GDP to grow significantly (estimated to reach £52 billion by 2017, or 1.6 percent of GDP).

The Internet’s benefit, however, is not fully captured by GDP numbers. We found additional “ripple” effects on the Egyptian economy and society.
• The Internet fuels economic activity—enabling businesses to conduct transactions with partners in other countries.

• The Internet also helps consumers to make better-informed purchasing decisions—benefitting businesses and consumers alike.

• In addition, the Internet increases productivity by speeding access to information and the efficiency of sales and procurement, especially in the agriculture, manufacturing, and services sectors.

• Further, the Internet contributes to social well-being and a connected society by simplifying access to government services and providing an easy way for Egypt’s people to connect with one another across the country and around the world.

To date, Egypt’s industries have not yet seized the significant commercial potential of the Internet.

• In the travel and tourism sector, Egyptian companies are just beginning to get in on the act. The migration of travel and tourism planning to the Internet has created a potential online marketplace for Egyptian travel and tourism services of £13 billion—of which we estimate that Egyptian tourism companies currently exploit less than 5 percent. Engaging more fully over the Internet could deliver significant benefits in terms of efficiency improvements and direct access to a wide range of potential clients around the world.

• In the manufacturing and industrial sector, we estimate a potential online marketplace for exports to developed countries of £6 billion. Leveraging the Internet would also enable the capture of significant efficiency gains.

Similarly, Egyptian small and medium enterprises (SMEs) do not take full advantage of the Internet, despite the significant economic benefits won by early adopters.

• Egyptian SMEs that use the Internet as a customer-acquisition channel sell more internationally and experience higher growth. Between 2007 and 2010, 55 percent of SMEs that were active online saw more than 20 percent annual growth. Only 25 percent of businesses that were not active online grew at such a rate.

• However, as of 2011, only 13 percent of small enterprises and just over 40 percent of medium enterprises in Egypt had an online presence.

Egypt’s Internet economy is now at a crossroads.

• Significant government and private investment has enabled a large and growing share of Egyptians to connect to the Internet.

• Further, the Internet’s perceived role in Egypt’s 2011–2012 revolution has built awareness of the power of the Internet to bring change to the very fabric of Egypt’s society and way of life.
• Still, while Egypt stands poised to capture the benefits of fully integrating the Internet into its economy and society, it has not yet embraced the commercial opportunities of the Internet as have other countries in the Middle East and North Africa region.

• The choice is whether to continue with business as usual or to take bold steps now to unlock the potential of e-commerce and energize online business-to-business transactions, thereby driving substantial growth in the Internet economy’s contribution to Egypt’s GDP.

Drawing on lessons learned from similar markets in the region, such as Saudi Arabia, Turkey, and the United Arab Emirates, we see three primary drivers of growth for Egypt’s Internet economy.

• One primary driver will be unlocking the potential of e-commerce, which is still underdeveloped in Egypt—representing only 0.2 to 0.3 percent of retail spending compared with 0.8 percent of retail spending in Turkey and 1 percent in the United Arab Emirates. Improvements are needed both on the supply and the demand side—removing barriers to setting up online merchant accounts for businesses and also increasing credit and debit card penetration across Egypt. Further, the government can play a role in raising awareness about the benefits of e-commerce.

• Another will be promoting e-inclusion—that is, expanding the reach of the Internet and enabling more Egyptians to access the Internet at high speeds through fixed or mobile broadband.

• A third driver will be building business engagement by leveraging the Internet commercially. Simplifying domain name registration processes would be an important contributor here.

Based on other countries’ success, we project that Egypt’s Internet economy could grow substantially over the next five years—at an estimated 22 percent per year in nominal terms or 12 percent in real terms—with significant benefits to consumers, businesses, and society overall.

• E-commerce will blossom as a result of increasing consumer awareness of, and confidence in, the Internet (in part through regulatory reform), greater availability of online and mobile payment, and growing momentum toward online entrepreneurship.

• E-inclusion, especially through greater fixed and mobile broadband access, will extend Internet and PC literacy (particularly among more rural governorates) and contribute to increasing the availability of online content in Arabic.

• Business engagement (with a specific focus on SMEs) will grow as traditional businesses are encouraged to pursue online commercial activities—by raising awareness of the benefits, providing support to those engaged in online exports, and enabling public-private partnerships with key industry players.
A decade ago the Internet was almost nonexistent in Egypt; less than 1 percent of the population (fewer than half a million Egyptians) ventured online. That picture has changed dramatically. Over the past year, the number of Internet users grew 17 percent, reaching 31 million (or 38 percent of the population) in July 2012, compared with 26.5 million the year before, a phenomenon that can be attributed in part to the revolution.1

This enthusiastic embrace of the Internet by the Egyptian people has been sustained by ongoing government investment—focused on three equally important areas. One is to bring more Egyptians online by subsidizing Internet-related technology and Internet access. Another is to provide Internet training for the general population and for businesses in order to build skills and increase proficiency. A third is to introduce Arabic-language Internet content in order to broaden the reach of the Internet.

These efforts have begun to pay off, as evidenced by the tremendous increase in the number of Internet users, the popularity of approximately 2,000 government-run IT clubs across the country, and registration in 2010 of the first Arabic domain name (مصر) in Egypt. Today there are as many Internet users in Egypt as in all the countries of the Arabian Peninsula combined.2

The benefits the Internet brings to Egypt’s economy are clear. It promotes economic growth by enabling the development of new business models; it lowers the costs of marketing and distribution to foreign markets, supporting the development of exports; and it increases productivity.

The number of Internet users in Egypt has now reached 31 million.

The intent of this report is to provide a better understanding of this economic impact, as well as to identify the additional opportunities the Internet represents and how Egypt can grasp them. It begins by assessing Egypt’s current Internet economy. It then explores the potential macro- and micro-economic benefits of the Internet for Egypt. It evaluates where Egypt stands on the global Internet stage. And it concludes by projecting Egypt’s Internet growth prospects over the next five years, highlighting the key success factors for this growth.

In order to set the stage for that broader discussion, we begin by laying out the current landscape of Internet demographics and usage in Egypt.
The Internet Enthusiasts: Young, Active, and Growing

The demographics of Internet usage in Egypt today show a young and quickly growing population of Internet enthusiasts. More than half of Egypt’s Internet users are under age 25. Further, Egyptian Internet users are very engaged online. In a 2012 Arab Advisors survey, 36.3 percent of respondents reported spending more than eight hours per day online, while just 4.7 percent reported spending less than two hours per day online. A much higher percentage of those under age 25 (40 percent) are in the “highest use” category compared with other age groupings—for example, just 21 to 34 percent of those age 25 to 64 are in the “highest use” category. In addition, young users are flexible and use a variety of channels to access the Internet, with mobile Internet becoming increasingly popular. In 2012, about 75 percent of mobile phone users under 34 reported using mobile Internet, WiFi, or both from their mobile device, compared with 50 percent or less for those in older age groups.

Overall, Egypt’s Internet users favor “traditional” online activities—that is, e-mailing, searching for information, voice communication over the Internet (VoIP), and downloading items of interest. But social networking is emerging as a widely popular activity. The number of Facebook users in Egypt almost tripled from prerevolution levels (roughly 4 million accounts at year-end 2010) to July 2012 (more than 11 million accounts), with the vast majority (75 percent) under age 30. Today, Egypt is the number one Facebook user within the Arabic region. In addition, Egyptians are loyal and frequent visitors to local websites, such as youm7.com (the Arabic-language news website of Egypt’s newspaper Youm7), masrawy.com (Egypt’s first online news portal), and fatakat.com (a forum for women).

Mobile devices are increasingly becoming the dominant access mode to the Internet in Egypt. In July 2012, 45 percent of Egypt’s Internet users went online via mobile connections—including USB dongles, which allow access to the Internet from a laptop through mobile networks. By July 2012, there were more than 10.5 million Egyptians who had subscribed to Internet service on their mobile phones, which means that roughly 12 percent of the 92.6 million active mobile phones in Egypt had Internet access.

Two factors have contributed to this evolution. First is the quick advance of technology. Smartphones, for example, are now used by 26 percent of those over age 16 in Egypt. Second, mobile Internet coverage has expanded rapidly. In 2010, 87 percent of the country’s population was covered by 3G service. The eMisr National Broadband Plan targets an increase to 98 percent by 2015.

In Egypt, 45 percent of Internet users connect via mobile devices.

Over the past three years, the pace of the growth in mobile connections has accelerated. Between 2009 and 2011, the number of mobile broadband subscribers (including those accessing the Internet via USB dongles), increased by 158 percent—compared with a 69 percent increase in the number of fixed broadband subscriptions. The number of USB dongle users increased nearly 600 percent between year-end 2009 (when there were an estimated 430,000 subscriptions) to July 2012 (when that number rose to 3 million). This uptick in dongle use has also left fixed broadband behind: by mid-2012 there were approximately 1.4 USB dongles in use for every fixed broadband connection.

These developments illustrate an important turning point, and they highlight a significant trend in the market—future growth in Internet usage will likely come from mobile high-speed Internet access rather than from fixed Internet access.

The Online Shopping Experiment

Online shopping is still nascent in Egypt—on both the demand side and the supply side. In 2011, less than 1 percent of Egyp-
tians (just 2 percent of Internet users) shopped online. Egyptians’ hesitation to shop online comes from a lack of familiarity with how e-commerce works and a wariness of online security. What’s more, businesses that want to go online face a number of barriers—among them complex processes for setting up an online merchant account (to enable customers to pay for purchases with a credit, debit, or bank card) and for registering a domain name (a difficulty that typically drives business to turn to international providers such as Go Daddy or to set up a Facebook page). Nonetheless, there is a dynamic, although small, e-commerce scene in Egypt.

Take otlob.com, for example, an e-commerce pioneer in Egypt and the preferred online destination for ordering food. Already in 1999, at a time when it was a challenge to convince restaurants to go online, otlob.com started its online ordering service with just two employees and 10 listed restaurants. The company did well, and three years later it was acquired by Egyptian Internet service provider Linkdotnet. In 2010, with its continued success, the company began to offer free web listings, deriving its revenues from commissions on sales. Today, Otlob’s website includes 200 restaurants—representing about 5 to 7 percent of the food delivery market in Egypt. When a new restaurant opens, it is the restaurant owner who contacts otlob.com to ask to be listed. And roughly 50,000 to 60,000 unique customers place five orders on otlob.com each month.

Otlob.com is no longer alone in the online shopping market, having since been joined by web-based companies such as nefsak.com and recently launched Jumia—both online stores.

While otlob.com is a truly home-grown Egyptian enterprise, Jumia illustrates the potential of e-commerce in Egypt for foreigners. Jumia was founded in July 2012 by the German online-business incubator Rocket Internet, which perceived a huge opportunity in Egypt. As the second most populous country in Africa, with a sizable middle class, and growing Internet use, Egypt seemed ready for an e-commerce site with global offerings. Rocket Internet’s intuition proved to be correct. The Jumia website took off quickly—offering more than 30,000 products within three months, achieving profitable double-digit growth each month, and attracting 31,000 highly engaged fans to its Facebook page, where comments are shared on eagerly awaited new items. Leveraging the novelty of e-commerce in Egypt, Rocket Internet’s know-how in digital marketing, and Egypt’s own talent pool, Jumia has grown quickly—from just a handful to more than 60 employees. The company, which hopes to become the number one e-retailer in Egypt, is off to a successful start.

Though small, there is a dynamic e-commerce scene in Egypt.

Another young entrepreneurial company, Offerna, saw the potential of discount websites based on group buying (the Groupon concept) and smartly tailored the idea for Egyptian Internet users. Offerna chose to focus on high-end, more Internet-savvy consumers. (See the sidebar “The First Group-Buying Website in Egypt.”) The company has been extremely successful, enjoying year-over-year revenue growth of 40 percent, and, in the process, has contributed to building trust in e-commerce in Egypt.

The Internet Divide

Despite the Internet’s considerable popularity with the younger population, access to the Internet is far from universal in Egypt. Demographics show that Internet use varies significantly according to social hierarchy and location. For example, in 2011, while 70 percent of those in the A and B classes of Egyptian society in urban locations accessed the Internet, only about 50 percent of those in the C class and 25 percent of those in the D class did. Overall urban broadband use was 30 percent, but it was higher in Alexandria (37 percent) and Cairo (34 percent) than in the Delta region (25 percent) and Upper Egypt (23 percent).
There are two major (and related) reasons why so many Egyptians do not yet use the Internet. According to a 2012 Arab Advisors Group survey, the first is the lack of computer literacy (cited by 43 percent of respondents) combined with the lack of Internet literacy (cited by 40 percent of respondents). To some extent, this situation is expected to change, in part because the revolution drew people’s attention to the Internet.

The second is the cost of buying an Internet-enabled device and Internet access. As of 2011, the Ministry of Communications and Information Technology (MCIT) reported that only 50 percent of Egyptian households...
owned a computer, while the International Telecommunication Union (ITU) reports that 77 percent of households in the United Arab Emirates and 63 percent of those in Saudi Arabia do. (These advanced countries in the region are traditional benchmarks for Egypt.)

In the past twelve years, Egypt has come a long way toward embracing the power of the Internet to strengthen its economy and society. The challenge ahead is to continue to seize the opportunities inherent in the Internet in order to broaden its reach and take advantage of its potential to accelerate economic growth and provide social benefits to the country as a whole.

NOTES
1. We define the Arabian Peninsula as Kuwait, Bahrain, Qatar, the United Arab Emirates, Oman, Yemen, and Saudi Arabia.
2. This report contains the latest available data at the time of publication.
6. Data on online shopping behavior is from the Consumer Barometer, January 2012, a study jointly conducted by IAB Europe, TNS Infratest, and Google.
THE IMPACT OF THE INTERNET ON EGYPT’S ECONOMY AND SOCIETY

**THE RECENT SURGE IN** Internet usage in Egypt is having a significant impact on Egypt’s commerce and society. But measuring that impact is difficult, because of the many aspects of Egypt’s economy and its way of life that the Internet pervades.

In order to quantify the Internet’s economic effect, we assessed its measurable contributions to Egypt’s GDP. We conducted this examination through the lens of four categories: consumer transactions over the Internet and consumer spending to access the Internet (grouped together as “consumption”); private companies’ (including telecom operators’) investments in IT equipment intended for Internet access; government spending on Internet-related technology and public access; and net exports—defined as exports of online goods and services as well as Internet-related information and communications technology (ICT) goods and services, less comparable imports. These transactions are captured in the inner circle of Exhibit 1. (For a more complete discussion of our calculation of the Internet’s share of Egypt’s GDP, or e-GDP, see the sidebar “Three Ways to Measure an Economy.”)

However, the Internet’s impact on Egypt’s commerce and society is not fully captured by e-GDP numbers. There are additional “ripple” effects. And while these ripple effects are also quantifiable to some extent, they are not included in Egypt’s e-GDP—or only included in an indirect manner. For example, the Internet enables Egyptian businesses to transact with partners abroad; it allows Egyptian consumers to make better-informed purchasing decisions; it speeds up access to information for Egypt’s services and agriculture sectors; it improves the efficiency of procurement in the manufacturing sector; and it facilitates the government’s provision of services. We categorized these “beyond GDP” effects into three parts—facilitation of economic activity, increases in productivity and exports, and improvements in social services and connectivity—shown in the three outer rings in Exhibit 1.

**The Internet’s Contribution to GDP**

Egypt’s Internet economy represents £15.6 billion or 1.1 percent of the country’s 2011 GDP. (See Exhibit 2.) The Internet’s share is comparable to that of several other sectors—for example, health services (1.3 percent), education (1.1 percent), and oil refining (1.1 percent). However, it is smaller than sectors such as restaurants and hotels (3.2 percent), wholesale and retail trade (11.5 percent), and commodities (14.9 percent).

A more granular look reveals some interesting information. For example, investment by
private companies (such as telecom operators) and spending by Egypt’s government amounted to E£12.3 billion, or 79 percent of the total e-GDP figure, much higher than in more developed economies. Spending by consumers on access to the Internet and, to a much lesser degree, on transactions over the Internet, totaled E£7.7 billion. The balance of Internet trade—composed of e-commerce imports, combined with imports and exports of ICT goods and services related to the Internet—was negative at –E£4.5 billion. This negative balance was driven mainly by Egypt’s imports of ICT goods that can be used to access the Internet, such as computers or mobile phones.

**EXHIBIT 1 | Only Some of the Internet’s Impacts on the Egyptian Economy Are Captured by GDP**

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<thead>
<tr>
<th>Impact Captured by GDP</th>
<th>Impact Not Captured by GDP</th>
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<tr>
<td>Inner circle. Egypt’s Internet economy, including:</td>
<td>Ring 1. Facilitation of economic activity, including:</td>
</tr>
<tr>
<td>• Consumption</td>
<td>• B2B e-commerce</td>
</tr>
<tr>
<td>• Private investment</td>
<td>• Online advertising</td>
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<tr>
<td>• Government spending</td>
<td>• Online consumer research for offline purchases</td>
</tr>
<tr>
<td>• Net exports</td>
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| Ring 2. Increases in productivity and exports, including: |
| • Enhanced efficiency in the manufacturing sector through e-procurement |
| • Benefits for the services sector through e-sales and improved access to information |
| • Gains for exporting companies through lower cost marketing and distribution to foreign markets |

| Ring 3. Improvements in social services and connectivity, including: |
| • Simplified access to jobs |
| • Improved access to information |
| • e-health and e-education services |
| • Social networking |

**EXHIBIT 2 | The Egyptian Internet Economy Is Worth E£15.6 Billion**

Sources: Ministry of Communications and Information Technology; International Data Corporation (IDC); Economist Intelligence Unit; International Telecommunication Union; Gartner; Ovum; Central Agency for Public Mobilization and Statistics (CAPMAS); BCG analysis.

Note: The total does not appear to add up because of rounding.
It is clear from these numbers that Egypt is still laying the foundation for its Internet economy. Private companies, the government, and individuals in Egypt are spending and investing simply to enable access to the Internet for themselves and for others. E-commerce, estimated to contribute E£1.6 billion or 0.1 percent to Egypt’s GDP, has so far barely developed. It constitutes the largest gap between Egypt’s Internet economy and those of other more advanced countries in the region and globally. For example, in 2010, e-commerce in Saudi Arabia and in the United Kingdom represented 0.7 percent and 4.5 percent of GDP, respectively.

Beyond GDP: The Ripple Effect
The Internet’s direct contribution to Egypt’s GDP does not fully capture the advantages it

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**THREE WAYS TO MEASURE AN ECONOMY**

There are three methods of calculating GDP, and none of them was designed with the Internet in mind. The *output or production method* combines the total value of goods and services produced. The *income method* measures total income earned by individuals and companies. The *expenditure method* computes total spending on finished goods and services.

The output method is theoretically the best way to measure the Internet’s contribution. It is the approach used to calculate the contributions of most traditional sectors in an economy. But using this method would require looking at every transaction of every good or service produced in Egypt and deciding whether it was “online” or “offline”—which is not practical with current data.

The income method has its own Achilles’ heel in the many assumptions that would have to be made about the share of traditional companies’ income to be allocated to the Internet and the share of multinational companies’ income to be allocated to Egypt. Those assumptions would call into question the accuracy of the final calculation.

Although the expenditure method is also imperfect, we chose to use it because it reveals the contributions of consumers, businesses, and governments to the Internet economy and approximates the sum of the online components of all the other sectors. The expenditure method is built on four pillars.

- **Consumption**: consumer spending on Internet access—both payments to Internet service providers and the cost of the relevant portions of devices used to connect to the Internet—and goods and services bought over the Internet by households in Egypt
- **Private investment**: private companies’ (such as mobile telecom operators) capital investments related to the Internet as well as their investments in ICT goods and services
- **Government spending**: public spending on ICT goods and services
- **Net exports**: exports of online goods and services as well as Internet-related ICT goods and services less comparable imports

It is important to be clear about the assumptions folded into the calculation of the Internet’s E£15.6 billion contribution to the Egyptian economy in 2011. Most notably, the full value of goods sold online is counted because it gives a sense of the importance of the Internet as a retail channel. Most online transactions, of course, terminate in the physical world, so they are not pure online transactions, but many of them might not have taken place without the Internet as a catalyst. Data on the “online” value generated at each link in the value chain are unavailable and estimating these numbers would imply a false level of accuracy. (See the appendix for more detail about the underlying assumptions.)
provides the Egyptian economy and society. Importantly, the Internet benefits businesses by generating and facilitating economic activity in the form of online business-to-business (B2B) transactions; it benefits consumers by allowing them to make better informed purchasing decisions; it builds productivity by increasing the speed of access to information, the ease of communication, and the efficiency and reach of sales and procurement; it increases exports by allowing companies to access developed markets at a lower cost; and it contributes to social well-being by improving the delivery of services and connectivity. The impact of the Internet in each of these areas, while only indirectly accounted for in e-GDP numbers, is substantial and can, at least in part, be quantified.

Facilitation of Economic Activity. The Internet generates B2B economic activity, such as online advertising or the provision of cloud-based business services. To avoid double counting, we do not include these transactions in our estimate of e-GDP, since the final sale of a product includes the value of such intermediate transactions. Nonetheless, these transactions represent a meaningful element of the Internet’s impact on the Egyptian economy because they illustrate how the Internet changes the way in which enterprises conduct their business and interact with each other.

Online advertising, for example, was worth an estimated E£0.5 billion in Egypt in 2011—4 percent of the total spending on advertising in the country that year. While TV advertising remains the most popular form of advertising in Egypt today, spending on online advertising grew at an average annual rate of 134 percent between 2009 and 2011, according to Magna Global, and it is expected to reach 5 percent of total spending on advertising by year-end 2012. This growth is driven, for the most part, by international companies. But adoption of online advertising is taking off within local companies as well, including telecom operators such as Mobinil (Egypt’s first mobile phone operator) and travel and tourism companies such as EGYPTAIR.

Still, B2B transactions that take place solely online represent only a small amount of total B2B transactions—estimated at less than 1 percent, based on a 2009 survey by Egypt’s MCIT.¹

The Internet also significantly benefits consumers, in particular by enabling prepurchase online research for goods that are subsequently bought offline. Based on an analysis of online purchasing habits by Egyptian consumers, we estimate that the value of goods researched online but purchased offline (ROPO) in Egypt in 2011 was E£24 billion (about 3 percent of total retail spending).² The “at-your-fingertips” information available on the Internet facilitates comparison shopping, acquaints consumers with new or unfamiliar products, and often saves time.

In 2011, 4 percent of Egypt’s ad spend was for online advertising.

Egyptian consumers, however, are not taking full advantage of these benefits yet. Clearly, there are some areas in which they are more likely to conduct online research before making purchases than they are in others—among them travel services, toys, and certain types of consumer electronics. In 2011, for example, 48 percent of Internet users who made business travel arrangements, 41 percent of those purchasing packaged holidays, and 36 percent of those making hotel reservations researched their purchase solely online before purchasing offline. That same year, 25 percent of Internet users who purchased toys and 20 percent of those who bought digital cameras and camcorders also conducted online research only before making offline purchases. By contrast, only 4 percent of consumers who purchased cars researched their purchase online only before purchasing offline.

Increases in Productivity and Exports. Numerous studies document how businesses around the world have employed the Internet to boost their productivity. Typically, these increases in productivity are the result of improved communications, reduced procurement costs, or simplified processes. A study by the European Union, for example, reveals a
correlation between the intensity of Internet use in the manufacturing and services industries and productivity increases of as much as 5 percent and 10 percent, respectively.3

A correlation has been demonstrated between a developing country’s embrace of the Internet and its volume of exports—a finding that is especially important for those developing countries seeking to export to developed countries. Specifically, the Internet enables emerging economies to diminish the impact of some infrastructure impediments—such as the lack of sophisticated marketing and distribution networks. According to research commissioned by the World Bank and the American Enterprise Institute, each additional percentage point of Internet penetration in a developing country boosts its exports to developed countries by 1.3 percent.4

Improvements in Social Services and Connectivity. We have already seen clear indications that improvement in the social well-being of the Egyptian population has been made possible through the government’s and the general public’s increasing use of the Internet. The government’s use of the Internet has improved efficiency in delivering social services, such as food subsidies. The Internet-enabled “family card,” for example, makes it possible for the government to monitor food purchases and, consequently, to better ensure fairness in the allocation process and improve allocation policies. The Internet also facilitates the government’s provision of education and health services to remote areas of Egypt. Similarly, and especially for those Egyptians in remote areas, VoIP increases connectivity and helps build social networks. Currently, more than 50 percent of Egyptian Internet users take advantage of VoIP technology to better connect with each other.

NOTES
2. We derived this value from our estimate of the percentage of people who purchased a product offline after conducting research online in 20 product categories, and the average spending per Internet user in each category. The data are from the Consumer Barometer, June 2010, a study of consumer online behavior jointly conducted by IAB Europe and Google.
INDUSTRIES IN TRANSFORMATION

Without doubt, the Internet is a profound driver of change for industries. It offers them the opportunity for significant transformation and economic benefit, in the following five ways:

- Geographic expansion without the need for a brick-and-mortar presence in new markets
- Profitable sales of the “long tail” of products—that is, online sales of large numbers of less-popular products in small quantities
- Improved automation and information exchange across supply chains
- Greater collaboration with and among customers, suppliers, and partners
- Increased transparency and a reduction in the ability of parties such as middlemen and brokers to take advantage of information asymmetries

Traditional companies that seize the opportunities opened by the Internet—adapting their operations and sometimes their business models—bring change not only to themselves but also to their industries, and in doing so contribute to the broader development of the Internet economy. This transformation however is also driven by a large, and in large part hidden, ecosystem of Internet-specific companies. (For more on the companies powering the Internet economy, see the sidebar “Engines of the Internet.”)

The Internet is a profound driver of change for industries.

In this chapter, we explore the opportunities the Internet creates for three important industries in Egypt: the travel and tourism sector, the manufacturing and industrial sector, and the media and content sector. We chose to analyze these industries not only because of their contribution to the Egyptian economy but also because of the current and potential impact the Internet has on their development.


The Internet has significantly changed the face of the travel and tourism industry around the world—most notably by transforming how consumers research, select, book, and pay for their travel arrangements. The Internet enables a convenient “do-it-yourself” approach. Travel arrangements
The Egyptian Internet economy is enabled by a group of companies that provide the goods and services that empower traditional companies to conduct business online. These companies are the engines of the Internet economy. Their annual revenue is estimated at about £12 billion.1 (Since many of these companies sell to other businesses, this amount is not comparable to our e-GDP calculation, which only counts final sales to consumers.)

These companies are best described as a “stack.”2 In IT, a stack is a set of layered software and hardware. Each layer can be swapped out and can communicate with layers above and below it. At the bottom of the stack is the physical infrastructure. Each higher layer contains a related horizontal set of activities. When Internet companies are viewed in this way, five layers emerge. (See the exhibit “The Building Blocks of the Internet Stack.”)

- **Telecommunications and infrastructure:** companies that build and manage the Internet’s infrastructure and optimize the delivery of content
- **Enablement platforms:** companies that provide essential services that facilitate trust, commerce, and traffic
- **Services and content platforms:** online retail sites, portals and aggregators, and

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**The Building Blocks of the Internet Stack**

<table>
<thead>
<tr>
<th>Communities</th>
<th>Mainly consuming</th>
<th>Mainly producing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access: devices and services used to access the Internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer hardware</td>
<td>Internet service providers</td>
<td>IT consultants</td>
</tr>
<tr>
<td>Software and operating systems</td>
<td>Mobile devices and access</td>
<td>Network hardware</td>
</tr>
<tr>
<td>Other hardware</td>
<td>Other services</td>
<td>Software development</td>
</tr>
<tr>
<td>Enablement platforms</td>
<td>Enablement platforms</td>
<td></td>
</tr>
<tr>
<td>Services and content platforms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pure-play online retail</td>
<td>Gambling</td>
<td>Cloud computing</td>
</tr>
<tr>
<td>Music, video, editorial</td>
<td>Gaming</td>
<td>Ad agencies</td>
</tr>
<tr>
<td>Other services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunications and infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hosting</td>
<td>Network hardware</td>
<td>Other hardware</td>
</tr>
<tr>
<td>Manufacture and maintenance of core network</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Gartner; IDC; Informa; MCIT; Ovum; Wehosting.info; company data; BCG analysis.

**Note:** The size of the boxes is proportional to the estimated revenues of the companies within them.

1Game consoles and other Internet-enabled devices.
2VoIP, online dating, e-learning, and social networking.
3Billing and payments, advertising networks and servers, analytics and metrics, verification, and encryption.
4Domain name registration and trading, mirroring, and content management.
other companies that serve the public or enable the provision of those services

- **Access**: companies that offer devices and services to access the Internet
- **Communities**: consumers who both consume content and services through the Internet and produce them through user-generated content, social networking, and other means

Stacks are interoperable, modular, and open. These characteristics encourage the innovation and competition at the heart of the Internet’s development. Interoperability and openness lower barriers to entry and encourage participants in the stack to build upon the creative efforts of others. Modularity encourages competition among players within a layer. Were the Internet vertically integrated, it would be hard to imagine a comparable level of innovation or growth.

In the exhibit on the previous page, the size of the blocks corresponds to the amount of revenue produced by the companies within them.

What is striking about Egypt is the relatively small size of both the services and content layer and the enablement layer as compared with the telecommunications and infrastructure layer and the access layer. As noted earlier, greater spending on infrastructure and access reflects the fact that the Egyptian Internet economy is still very focused on enablement and has not yet transitioned into a consumption-driven sector.

The services and content layer, which represents the heart of the virtual economy and includes online news (such as Masrawy) as well as pure online retail (such as Jumia), is particularly underdeveloped—representing only 10 percent of the total, compared with roughly 35 percent in the United Kingdom (where it is most developed) and 18 percent in Turkey.

The reasons underlying this low level of development are clear: an emerging online retail sector; the clear dominance of free content, not yet sustained by a developed online advertising market; and a small web services and enablement sector that is dominated by a few players (such as LinkOnline) and has only a limited supply of support services (such as billing, hosting, or web analytics).

The development of both the services and content layer is, however, essential to Egypt’s overall Internet economy. Companies that provide web hosting, mirroring, and content management services are vital to the development of a robust online content sector. Similarly, verification, encryption, billing and payments, as well as ad servers and search engines are key enablers for e-commerce.

**Notes**

1. This revenue calculation is for 2009.
2. For each segment of the stack, we used several methods to estimate revenues and revenues per employee, including bottom-up market sizing, external estimates, and top-down macro estimates.
have become easier to manage, thanks to the emergence of online travel agents (such as Expedia) and interactive platforms (such as TripAdvisor) that not only facilitate comparisons among destinations and accommodations but also provide opportunities for travelers to customize their trips and draw upon others’ experiences.

The underlying numbers enable us to take a closer look at how the Internet has become a transformative sales channel for the travel and tourism sector. In 2011, for example, online leisure and unmanaged business travel bookings in Europe represented 38 percent of the total European travel and tourism market, worth more than £700 billion (€88.6 billion). In addition, the Internet has empowered suppliers, such as hotels, to acquire customers directly through their online channels—enabling them to increase the value they capture by eliminating the middlemen (the travel agents and tour operators). For example, in 2011, according to PhoCusWright, a global travel market research company, 62 percent of all leisure travel booked online in the European travel and tourism market was booked directly on the supplier’s website.¹

The Internet empowers suppliers to acquire customers directly.

These changes are significant to Egypt’s travel and tourism industry because the majority of tourists who come to Egypt are from countries in which consumers extensively research and book tourism online. For example, in 2011, travelers from the United Kingdom and Germany accounted for 9 percent and 8 percent, respectively, of tourists to Egypt—two countries in which online tourism has become a natural habit. (In 2011, 57 percent of travelers from the United Kingdom and 51 percent of travelers from Germany purchased their tourism services online.)

Moving online can provide the Egyptian travel and tourism industry with three specific benefits: First, the Internet enables efficiency improvements in the booking, payment, and customer communication processes. Second, the Internet makes it possible for Egyptian travel agents and hotels to capture some of the spending on travel in Egypt that is currently in the hands of foreign tour operators (who make travel arrangements for the majority of tourists to Egypt) and to directly acquire their own customers. Third, the Internet presents a range of opportunities for boosting tourism, helping the country to achieve its aim of 30 million tourists by 2020. The Internet enables reaching out to online-savvy markets in which tourism to Egypt is low. In 2011, for example, Americans represented only 2 percent of tourists to Egypt, but more than 82 percent of U.S. tourists who bought a packaged holiday that year did some research online before they made their purchase. The Internet also provides a platform for raising awareness about lesser-known destinations and travel options within Egypt, attracting tourists who would not have otherwise considered the country as a destination. Further, the Internet improves the industry’s ability to serve niche markets and to address emerging trends in tourism (such as short-stay tourism, desert safaris, or customized travel packages).

Seizing these benefits could significantly improve the vitality of Egypt’s travel and tourism industry. We estimate a potential online marketplace for Egyptian tourism services worth £13 billion. (See Exhibit 3.) But Egyptian travel and tourism companies have yet to fully exploit this market.

A few Egyptian companies are harnessing these benefits. EGYPTAIR, for example, has been leading Egypt’s travel and tourism industry in adopting the Internet to promote its services, and it has already captured some of the benefits. In 2010, the airline spent 25 percent of its marketing budget on online advertising aimed at international travelers through search engines, affiliations, and social networks. At that time, 5 percent of EGYPTAIR’s reservations were made online. Now, the airline is successfully utilizing the Internet to attract new international visitors—such as Persian Gulf tourists, a growing market for Egypt.
Similarly, the Internet has benefited some small Egyptian travel and tourism players, such as online travel agents that employ the Internet to offer custom-made packages or services to sophisticated individual tourists. By enabling these travel agents to take a targeted approach, the Internet allows them to compete with large foreign tour operators—in effect, compensating for their lack of scale.

For example, Memphis Tours has developed a successful business model that relies primarily on the Internet as its interface with customers—bringing in £50 million in revenue in 2010. While the company’s revenues dropped sharply during the recent political transition, which significantly reduced tourism to the country, its revenues are expected to pick up again (to £35 million) in 2012, as the industry continues to recover.

Nonetheless, the industry as a whole has yet to fully embrace the online opportunity, as most of its players seem to have taken only a few of the necessary steps toward a real online transformation. For example, in 2010, about 40 percent of travel agents in Egypt had a website, but only 3.5 percent of them offered online payment.² Their online presence only took them part way toward capturing the benefits of being online. Clearly, there is an opportunity for these travel agents to more fully leverage the Internet to build their customer base.

### The Manufacturing and Industrial Sector: Fresh Options for Exporters

The Internet provides a number of significant benefits to Egyptian manufacturing and in-
dustrial companies. It enables these compa-
nies to expand their geographic footprints
and to lower the costs of distribution. It gives
them the ability to target niche markets with
specially tailored offerings. It provides the op-
portunity to sell products directly to consum-
ers, removing intermediaries such as retailers.
And it allows for increased collaboration with
customers, suppliers, and partners.

Leveraging the Internet to grow exports rep-
resents a significant opportunity for Egyptian
industrial companies because their customers
are quickly transitioning toward online trans-
actions. For example, in the EU-27 countries,
with which Egypt does one-third of its manu-
facturing and industrial exports business,
about 20 percent of businesses engage in on-
line purchases. This figure is above 40 per-
cent in Austria, Denmark, Germany, the Unit-
ed Kingdom, and Ireland, and as high as 50
percent in Belgium and Norway. European
firms’ propensity to purchase online also in-
creases with company size—around 40 per-
cent of large European companies purchase
goods and services online.

E-commerce has already become an impor-
tant sales channel for the manufacturing
industry in many advanced economies,
demonstrating catch-up potential for Egyp-
tian manufacturing companies. Across
Europe, 13 percent of manufacturing compa-
nies sell online. And in the United States,
manufacturing companies’ online sales
were worth more than £12.5 trillion in
2010, accounting for 46 percent of all manu-
facturing sales.

Considering the volume of Egypt’s 2009 man-
facturing and industrial exports to its top 30
trade partners, and the propensity of busi-
esses in these countries to purchase online,
we estimate the potential online market for
the Egyptian manufacturing and industrial
sector to be £66 billion. Migrating trade on-
line could also deliver significant efficiency
gains for exporters—for example, through au-
tomating the order placement and payment
process. More importantly, exporters can rea-
sonably expect to generate additional busi-
ness from establishing a stronger online
presence as they expand their visibility to
customers around the world, make their prod-
ucts readily accessible for these consumers,
and widen the market for Egyptian special-
ties and niche products.

The potential size of the online market, of
course, differs by industry. Fragmented and
heavily intermediated industries with stan-
dardized products are more eager to shift
their activity online because they have the
most to benefit from doing so. Among Egypt’s
largest exporters, we see the most B2B online
activity in the apparel, chemical, electrical en-
gineering, and plastics industries—indicated
by the number of exchanges taking place on
B2B marketplaces, which are one of the driv-
ing forces behind B2B e-commerce.

In 2010, two-thirds of
Egypt’s top exporters
had an online presence.

Although Egyptian manufacturing and indus-
trial companies have begun to position them-
selves online, they have not yet fully seized
this opportunity. For example, in 2010, two-
thirds of Egypt’s top 1,000 exporting compa-
nies had established an online presence but
only about 6 percent of them actually used
their websites for advanced interactions with
customers and suppliers, such as automated
ordering, e-commerce, or direct extranet ac-
cess (extending intranet access to those out-
side the organization).3

While there are indications of early “wins”
for companies in this sector that have begun
to embrace the Internet, industrial and manu-
facturing companies considering broad
adoption of advanced Internet capabilities
face several challenges. First, it is often diffi-
cult to upgrade a legacy IT infrastructure to
service online customer relationships. Those
companies that have successfully enabled
advanced Internet services, such as e-com-
merce and online payment, have been able
to integrate their Internet website with their
traditional order-taking operations. Second,
employees’ technological skills are often not
sufficiently sophisticated. However, progress
is being made on this front. MCIT reports
that in 2010, 43.5 percent of public higher-
education institutions provided IT courses—
up from 32.8 percent in 2008. Nonetheless,
many industrial and manufacturing compa-
nies simply do not have employees with suf-
cient specialized skills in areas such as
search-engine optimization, search-engine
marketing, customer-relationship manage-
ment, or e-commerce.

The Media and Content Sector: Challenges and Opportunities

Around the world, the media and content in-
dustry has probably been the most disrupted
by the global embrace of the Internet. The
emergence of user-generated content and
the dominance of free content over paid
content (enabled by the Internet’s low distri-
bution costs) have challenged established
business models. The Internet has also shak-
en the very foundation of the creative world
by enabling broad distribution of pirated
material.

Egypt has been profoundly impacted by con-
tent piracy, which is facilitated by a number
of popular pirated-content downloading plat-
forms. According to a 2009 report by the In-
ternational Intellectual Property Alliance, 97
percent of digital music in Egypt in 2009 was
pirated. The Business Software Alliance re-
ports software piracy rates of 61 percent in
2011, and it estimates the commercial value
of unlicensed software at about E£1 billion.
According to the Business Software Alliance,
reducing software piracy by 10 percent over
four years would create about 2,000 new jobs
in Egypt’s IT sector.

The online availability of Arabic-language
content remains low.

At the same time, the Internet creates tre-
mendous opportunities for Arabic-language
content providers, because it enables wide
distribution of materials at low cost to rough-
ly 86 million Arabic-speaking Internet users.
Examples include the online music platform
Mazika and the online video platform Shofha,
each of which is based in Egypt and special-
izes in content for the Arab world. Initially,
Mazika offered downloads of pirated music.
But in 2003, after it was acquired by Linkdot-
net, it started on a new course—obtaining
the rights for its music offerings. By 2007,
Mazika began developing its own content
management software, which it licenses to
mobile operators. Shofha went online in 2009
as a video-on-demand service, licensing con-
tent to Internet service providers. Today, both
companies’ revenues come primarily from
B2B customers through licensing fees; only a
small percentage (1 to 2 percent) comes from
customers that buy content online.

Egyptians, along with those across the globe,
are starting to transition from the tangible to
the online world for media. For example, a
Nielsen survey conducted in Egypt in 2011
shows that 51 percent of Internet users go on-
line for political news, 42 percent for sports
news, 30 percent for social news, and 19 per-
cent for economic news. Among those who
understood the demand for online Arabic-
language content and seized the opportunity
were two news-oriented websites. One is the
news portal Masrawy. (See the sidebar “A
Lean, Diversified, and Popular Arabic-Lan-
guage Portal.”) The other is Akhbarak.net, an
Arabic-language news aggregator. Akhbarak.
net had 4 million unique visitors in August
2012, after moving up 1,000 spots in Alexa’s
global online traffic ranking during the first
half of 2012. (See the sidebar “How an Egyp-
tian Student Created the Number One News
Aggregator.”)

Although the Internet has enabled the devel-
opment of innovative and successful Arabic-
language Egyptian media, the overall avail-
ability of Arabic-language digital content
remains low—not only in Egypt but also in
Arabic-speaking countries generally. Arabic-
language content accounts for about 1 per-
cent of total online content, while Arabic-
speaking users make up 3.8 percent of the
Internet population worldwide.4 This under-
development of digital content in Arabic has
been traced to several causes. One is the pau-
city of online advertising, needed to provide
financial support for Arabic-language con-
tent. In 2011, for example, just 4 percent of
the total spent on advertising in Egypt was for online advertising, compared with much higher percentages in China (24 percent), Russia (16 percent) and Brazil (12 percent). Another cause is piracy, which discourages Arabic-language content providers from publishing online and English-language content owners from translating content into Arabic. A third cause is the lack of an adapted Internet framework for non-Roman characters—as reflected by the fact that until May 2010 there were no domain names in Arabic.

Increasing the availability of online Arabic-language content is critical not only to the well-being of the media and content industry in Egypt but also to the development of Egypt’s Internet economy.

Notes
2. Mohamed Abou-Shrouk and Wai Mun Lim, Egyptian Travel Agents and e-Commerce (Springer-Verlag, 2010).
3. Data in this paragraph are drawn from a BCG analysis of the online activity of the affiliates of the Industry Modernization Center (IMC), which include the largest, most significant industrial exporters in Egypt.
4. Data on Arabic content online is from ITU, Digital Arabic Content—Background Paper, February 2012, published in connection with the Connect Arab Summit held in Doha in March 2012. Data on the number of Arabic-speaking Internet users is from Internet World Stats.
Akhbarak.net, one of the first Arabic-language news aggregators in the Middle East, was founded in 2003 by an Egyptian student at the Massachusetts Institute of Technology who had a keen interest in Egyptian sports. His website, which collected sports news from multiple online sources, was soon discovered, and traffic started picking up. By 2004, Akhbarak.net had expanded from sports news to all types of news, although with a continued emphasis on sports.

Strategic partnerships with other websites helped to generate continued interest and to keep costs down. Akhbarak.net provided either free tailored news feeds or traffic to other news websites if the websites would, in return, add a link to Akhbarak. In addition, in September 2010, Akhbarak.net partnered with eSpace, which provided web development at a discount in exchange for a minority share.

Today, Akhbarak.net is the number one news aggregator in the region. During and after the revolution, the website changed its news offering, launching a redesign and focusing more on political news and current events. Political news—both local and international—now represents 50 percent of its content. Because of its broad sourcing, the website is respected as an unbiased source of news: roughly 6,000 articles a day are collected from some 100 news sources and then selected by algorithm for posting on Akhbarak.net.

Since its humble beginnings, the company has grown from one to six employees and from a few hundred dollars in revenue to $20,000 to $30,000 per month—doubling its revenue in the past two years through online advertising. In 2012, there have been 4 million unique visitors to its website each month (30 percent located outside of Egypt) and 60 million page views per month. It should not come as a surprise that Akhbarak.net already has plans in place to pursue additional growth opportunities.

As this report goes to press, Akhbarak.net has signed a letter of intent to be acquired by Sarmady, a subsidiary of Vodafone Egypt. According to Osman Ahmed Osman, the founder of Akhbarak.net, “We have spent the past few years investing in building a top-notch team, developing unique technology, and growing our user base. With the backing of Sarmady and Vodafone, we hope to be able to grow our current ad-based revenue stream and develop new streams of revenue.” “For us,” said Shady Eneim, CEO of Sarmady, “Akhbarak.net is an investment that reaches beyond acquiring a news aggregator. We are investing in the engine that empowered Akhbarak.net to become the top news aggregator in the region, and we have plans to use this engine across other properties.”
IN MANY WAYS, SMEs and microcompanies (which account for over 90 percent of active businesses in Egypt) represent the hidden force behind Egypt’s economy. At the same time, companies of this size are not typically early adopters of new technology. While some SMEs and microcompanies are seizing the opportunities for entrepreneurship and growth that the Internet presents, many have yet to do so. As of 2011, 59 percent of large companies, 41 percent of medium-sized companies, and 13 percent of small companies in Egypt had a website or a web presence.

The Internet can level the playing field between SMEs, on the one hand, and larger companies, on the other. It provides SMEs with cost-effective advertising and distribution channels, which enable even the smallest of companies or entrepreneurs to expand geographically, more effectively market products to niche clients, and increase collaboration with customers.

With the Internet catching on in Egypt, smaller companies are beginning to catch up—as illustrated by two simultaneously emerging trends. First, SMEs have begun to seize the advantages offered by the Internet. Memphis Tours, once a traditional travel and tourism agency, provides a good example. By shifting all of its customer-relationship management online, it significantly enhanced its ability to reach out to international customers and to offer customized travel services. The payoff has been substantial: the company’s revenues grew from about £1 million in 2004 to about £50 million in 2010. (See the sidebar “Paving the Way for e-Tourism in Egypt.”)

Second, a vibrant ecosystem of online-born companies has sprung up. Many entrepreneurs, the founders of Offerna among them, have managed to turn the asset-light nature of the Internet to their benefit and to build successful business models from the ground up with only limited investments.

For SMEs that embrace the Internet, the payoff has been substantial.

BCG conducted a survey of 750 SMEs and microcompanies in Egypt in order to find out the extent to which they use the Internet. In analyzing survey responses, we separated responses from SMEs and those from microcompanies in order to obtain a more in-depth perspective. To dig even more deeply, we also conducted extensive interviews with owners and senior managers at a significant number of these companies.
We categorized survey respondents into three groups.

- **Active online**: Businesses that leverage the Internet for commercial activities (23 percent of the SME sample and 10 percent of the microcompany sample).

- **Online**: Businesses that have a website or social media page but do not engage in commercial activities online (45 percent of the SME sample and 34 percent of the microcompany sample).

- **Not online**: Businesses that do not have a website (32 percent of the SME sample and 56 percent of the microcompany sample).

Our research shows that the Internet significantly benefits those SMEs that are commercially active online. These SMEs tend to grow faster and to sell more to international customers than those that simply have an online presence and those that are not online at all. (See Exhibit 4.)

One example of a company that is active online is ALEF Bookstores, a retail book chain that opened its first store in July 2009. Through its online presence, it has built a solid reputation and a loyal customer base. By late 2012, it was selling an average of 10,000 books a month, and it has just opened its eighth store—a success that General Manager Ahmed Rahmy says would not have been possible without the Internet. (See the sidebar “A Truly Connected Bookstore.”)

SMEs in general reported sizable benefits from having an online presence: for example, improved returns from their advertising campaigns, increased productivity, greater ease in recruiting, and an enhanced ability to provide a larger range of products to customers. In each of these areas, SMEs that are active online received greater

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Memphis Tours Egypt started as a traditional travel agency, based in Port Said, in 1955. It offered packaged Nile cruises and accommodations to international travel agents. But in 2002, Memphis Tours’ business changed dramatically, when its CEO, Yahia Abu El Hassan, perceived the opportunity to serve Western European and American tourists directly and to offer more individualized services. He took Memphis Tours’ business online.

The move has completely transformed Memphis Tours’ operations—from sales to marketing to payments—most of which take place online. The company website is now its only sales channel; the majority of its marketing is Internet-based; and all its clients book and make payments through an Internet-payment gateway. In the process, the company has grown tremendously, multiplying its revenues fiftyfold between 2004 and 2010. It now has 115 employees. During the recent political transition, which significantly reduced tourism to the country, the company’s revenues dropped sharply but are expected to pick up as the industry continues to recover.

Becoming an online travel and tourism agency enabled Memphis Tours to overcome its inherent scale disadvantage in competing with larger tour operators and travel agents. What gives Memphis Tours an edge is its ability to provide custom services to demanding tourists. The Internet also gives Memphis Tours the power to effectively reach international customers at a small cost; Memphis employs search-engine marketing in nine different languages and appears on the traveler-opinion aggregator TripAdvisor, where it consistently ranks as one of the top-rated Egyptian travel agencies. Currently, most of Memphis Tours’ revenues come from outside of Egypt.

**PAVING THE WAY FOR E-TOURISM IN EGYPT**
benefits than those with only an online presence. The biggest benefit reported by SMEs that are active online is the ability to expand their geographic footprint—especially into other regions within Egypt. (See Exhibit 5.)

Take, for example, Nefsak, an e-commerce company. Its online-only presence enables it to offer a vast range of products at competitive cost to customers throughout Egypt—with about one-third of its orders coming from customers in remote or secluded areas.

A TRULY CONNECTED BOOKSTORE

When ALEF Bookstores opened its first shop in Cairo in July 2009, it did not want to be just another bookstore. It wanted to appeal to younger readers. So its founders simultaneously established an online presence through its own website, social network pages, and YouTube.

Over the past 3 years, it has actively utilized the Internet to advertise, get feedback from customers, and sell online through its e-commerce channel (opened in April 2010). The company now has more than 50,000 visitors to its website each month. It has successfully used its online presence to build its reputation in Egypt, market its books, and increase customer loyalty. In addition, ALEF Bookstores launched its innovative "Knowledge Taxi" initiative, which supplies over 400 taxis in Cairo with a mini-library, freely available to customers during their ride.

Although the company’s online sales are still small (out of 10,000 books sold per month, only 100 are sold online), they are growing—as are overall revenues, fueled by an expanding customer base. Earlier this year, ALEF Bookstores opened its seventh store in Madinaty, a new suburb of Cairo; it has just opened its eighth store in Ramses Railway Station in Cairo; and it plans to open an additional store in the Sidi Gaber Railway Station in Alexandria. Overall, between July 2009 and late 2012, the company’s revenues have grown tenfold.

EXHIBIT 4 | SMEs That Are Active Online Grow Faster and Sell More Internationally

<table>
<thead>
<tr>
<th>SMEs with yearly growth of 20 percent or more, 2007–2010</th>
<th>SMEs with international sales of 10 percent or more, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample</td>
<td>n = 520</td>
</tr>
<tr>
<td>Not active online</td>
<td>32%</td>
</tr>
<tr>
<td>Active online</td>
<td>55%</td>
</tr>
<tr>
<td>Total sample</td>
<td>n = 119</td>
</tr>
<tr>
<td>Not active online</td>
<td>29%</td>
</tr>
<tr>
<td>Active online</td>
<td>38%</td>
</tr>
</tbody>
</table>

Sources: BCG survey of 750 SMEs, December 2010; BCG analysis.
Note: “Not active online” includes companies that are “online” and companies that are “not online.”
While the benefits of the Internet are available to both SMEs and microcompanies, there is a clear divide between those two groups. BCG found that microcompanies embrace Internet possibilities to a much lesser extent than SMEs. Nonetheless, some dynamic entrepreneurs are building very asset-light online businesses.

One such entrepreneur graduated in 2010 from German University in Cairo with a bachelor’s degree in digital media. Mohamed Azab’s idea was to develop a website that would introduce a completely new business model into Egypt’s e-commerce scene. That website, which he is calling Shoghlanah, builds on the success of TaskRabbit and Zaarly in the United States. The idea is to connect people who have a task to be done, but who lack the time or skills, with people who can reliably accomplish that task. On Shoghlanah, you can post a task (such as household chores or the delivery and assembly of furniture) with the price you are willing to pay; those interested in performing the task bid for, and potentially win, the business; when the task is done, you pay for it and are invited to write reviews and make recommendations to friends. In January 2012, the concept won first prize during the people’s vote at Startup Weekend in Cairo, and the idea has taken off even before the website’s launch—Shoghlanah already has 40,000 Facebook fans and 150 followers on Twitter. Shoghlanah is now under Venture Capitalists MoraBiz, a company owned by Azab and other investors.

While Internet sales have a vast reach—across Egypt and beyond—Greater Cairo is the hub of SME online activity. Greater Cairo boasts the largest share of SMEs in Egypt (47 percent) and the largest combined total of SMEs that either have a website or are active online. (See Exhibit 6.) Alexandria and the North Coast, with a large share of Egypt’s SMEs and a high percentage of active-online SMEs, can be considered a secondary hub. The Suez Canal and Red Sea region, with the highest percentage of active-online SMEs, is also a very dynamic one, but only holds a small share of Egypt’s SMEs overall (about 4 percent).

Also, there are some industries in which SMEs are more likely to favor online activity. For example, there is more SME online activity in

<table>
<thead>
<tr>
<th>Key benefits of Internet use</th>
<th>Percentage of respondents who agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanded our business to customers in other regions of Egypt without a physical presence</td>
<td>61</td>
</tr>
<tr>
<td>Improved our advertising efficiency (lower cost, better targeting)</td>
<td>57</td>
</tr>
<tr>
<td>Increased our productivity</td>
<td>48</td>
</tr>
<tr>
<td>Expanded our business to international customers</td>
<td>47</td>
</tr>
<tr>
<td>Facilitated rapid feedback from customers</td>
<td>45</td>
</tr>
<tr>
<td>Improved our recruiting efficiency</td>
<td>44</td>
</tr>
<tr>
<td>Enabled us to stock and sell a larger range of profitable products</td>
<td>44</td>
</tr>
<tr>
<td>Generated more jobs</td>
<td>24</td>
</tr>
</tbody>
</table>

Note: Respondents were asked: To what extent do you agree that the Internet has changed your business in the following ways?
THE COMPELLING ATTRACTION OF EGYPTIAN E-COMMERCE

In late 2008, Sherif Nassar launched an online store called Nefsak. Today, it is one of the largest e-commerce sites in Egypt. In June 2012, there were roughly 600,000 visitors to the Nefsak website—a number that has grown about 10 percent a month since the website was introduced. The revolution had only a very brief impact on the number of visitors to the website. In fact, within just a month of the government’s shutdown of the Internet (between January 27 and February 2, 2011), the number of visitors to the website returned to normal levels. Nassar has found that, as consumers start to see the Internet as a channel for more than just e-mail, his business is thriving.

The Nefsak website applies the same formulas as other well-known international online retailers—but adapted to the Egyptian market. Nefsak offers cash-on-delivery payment arrangements and flexible delivery options to cater to an unbanked and sometimes very secluded population.

Nefsak’s focus has evolved from books to electronic devices and cosmetics. Nefsak offers Egyptians a large assortment of products—more than 25,000 in all, ranging from books to televisions. According to Nassar, such a large variety of products would be “unmanageable by a traditional store and often not easily available for consumers outside of major city shopping centers.”

Nefsak relies heavily on online marketing, especially through search engines such as Google’s AdWords. AdWords not only directs customers to the Nefsak website but it also provides insight into customers’ needs by enabling analysis of their search queries.

Nefsak’s success is proof that e-commerce is poised to grow in Egypt, benefiting consumers and the economy as a whole. As Nassar puts it: “Contrary to the situation in some Western European markets, e-commerce in Egypt is not simply a cheaper sales channel that substitutes for brick-and-mortar shops; it is a convenient service that can give consumers access to products they would not be able to purchase easily otherwise.”

the media, tourism, trade, and transportation sectors than in more traditional sectors, such as manufacturing and personal services.

One of the industries that has benefited most from Egypt’s embrace of the Internet is IT outsourcing and applications development. This sector has successfully leveraged a highly qualified talent pool (especially in Greater Cairo and Alexandria) combined with Internet-enabled low distribution costs to foreign markets in order to deliver services to local and international companies “over the cloud”—where neither physical distribution nor installation is required.

For example, in April 2010, Vimov (an Alexandria-based SME that specializes in applications development for mobile devices) released Weather HD for the iPad. This application became the fourth-best-selling application on Apple’s App Store a few days after its release, and it has been downloaded more than 5 million times worldwide to date. Building on its success, the company released Weather HD2 in July 2012.

Another success story is eSpace, which was founded by eight Alexandria University graduates in 2000. The company, which specializes in web-application development and cloud-computing services, targeted international companies—mainly in the Gulf and the United States—as its initial clients. By 2004, eSpace was focused more closely on the Middle East—first on Saudi Arabia, working with one of the
largest online communities in the region, and then on clients in other Gulf countries such as Qatar and the United Arab Emirates—delivering advanced technologies and features.

Three years later, eSpace turned its attention to entrepreneurs and startups, such as Akhbarak.net, the Arabic-language news aggregator, and Marginize, which created a plug-in enabling Internet users not only to view real-time feeds from Facebook and Twitter in the margins of any webpage in order to see what the online community is saying about that page but also to join in on the conversation. After the revolution, eSpace played a pivotal role in enabling e-government in Egypt—developing websites for the constitutional referendum, the elections of the Egyptian Parliament and Egyptian Constituent Assembly, and the Egyptian presidential election. Today, 62 percent of eSpace’s revenues are from outside Egypt. Since its beginnings eSpace has been generous in offering free services, which have also served as effective marketing tools; these include free product testing on its website and free bimonthly business and technical consultations in public cafes in Alexandria.

Still, Internet usage among SMEs and micro-companies remains limited overall—even more so when it comes to incorporating sophisticated online functionality. For example, only 4 percent of the companies in our sample reported that they offered their customers the opportunity to pay online. While there are many barriers that prevent wider adoption of the Internet by these companies, the biggest is a lack of awareness. Fifty percent of the SMEs we surveyed reported that they do not have a clear understanding of the Internet’s potential to develop their business.

This situation, however, can in part be turned around through greater recognition of the business advantages the Internet delivers. The strides that companies such as ALEF, Shoghlanah, Nefsak, and eSpace have made—and the benefits they derive from the Internet—will serve as an inspiration for the vast number of micro, small, and medium-sized companies in Egypt.

**EXHIBIT 6 | Greater Cairo Is the Hub of SME Online Activity**

<table>
<thead>
<tr>
<th>Share of SMEs in Egypt</th>
<th>Greater Cairo</th>
<th>Suez Canal and the Red Sea</th>
<th>Alexandria and the North Coast</th>
<th>Delta</th>
<th>Upper Egypt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active online (%)</td>
<td>27</td>
<td>33</td>
<td>25</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Online (%)</td>
<td>53</td>
<td>36</td>
<td>36</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>Not online (%)</td>
<td>20</td>
<td>31</td>
<td>39</td>
<td>42</td>
<td>55</td>
</tr>
</tbody>
</table>

**Sources:** BCG survey of 750 SMEs, December 2010; CAPMAS; BCG analysis.

**Note:** The total for the Delta region does not add up to 100 percent because of rounding.

**Not online (%):**
- Greater Cairo: 20%
- Suez Canal and the Red Sea: 31%
- Alexandria and the North Coast: 39%
- Delta: 42%
- Upper Egypt: 55%

**Online (%):**
- Greater Cairo: 53%
- Suez Canal and the Red Sea: 36%
- Alexandria and the North Coast: 36%
- Delta: 43%
- Upper Egypt: 33%

**Active online (%):**
- Greater Cairo: 27%
- Suez Canal and the Red Sea: 33%
- Alexandria and the North Coast: 25%
- Delta: 16%
- Upper Egypt: 12%
INTERNET INTENSITY IN EGYPT

Although the Internet is a global phenomenon, the extent of its adoption varies greatly between countries, and even between regions within a single country. Some countries, such as South Korea, have built advanced broadband infrastructures. Eastern European markets, such as Estonia, have recently invested heavily in infrastructure and other initiatives to further the use of the Internet, moving them swiftly up the ranks. Others, such as the Nordic countries, have excelled at bringing businesses, government, and consumers to the Internet. But many nations are far still far behind the average rate of Internet adoption for the developed world.

BCG’s e-Intensity Index

How well do countries fare when compared with one another? The BCG e-Intensity Index sets out to measure the depth and reach of the Internet’s influence on commerce and society across 85 nations—including OECD members, the EU-27, the BRICI countries (Brazil, Russia, India, China, and Indonesia), 14 African nations, and other noteworthy economies such as Hong Kong, Saudi Arabia, Mexico, Argentina, and Singapore.

The index measures Internet activity along three dimensions:

- **Enablement**: how well built is the infrastructure and how available is access?
- **Expenditure**: how much money are consumers spending on retail online and how much is spent on online advertising?
- **Engagement**: how actively are businesses, governments, and consumers embracing the Internet?

The index balances enablement (which has a 50 percent weighting) against the two measures of usage: expenditure and engagement (each with a 25 percent weighting). Despite its assumptions and the inherent margin of error, the index is able to show not only how one country compares to others, but also where a country’s strengths and weaknesses lie within the three dimensions.

Egypt’s Standing on the Global Internet Stage

Egypt’s overall score and ranking on BCG’s 2012 e-Intensity Index is quite low, even when compared with other developing markets. Egypt ranks 77 out of 85 markets, and received a score of 21. (See Exhibit 7.) Egypt’s score is less than half of the full survey average of 52, but slightly above the population-weighted average for Africa of 19; it is in line with expectations based on the country’s level of economic development, as defined by GDP per capita at purchasing power parity. Egypt ranks above several African nations (such as Kenya, Ghana, Nigeria, and Camer-
EXHIBIT 7 | Egypt Ranks in the Bottom Quartile on BCG’s e-Intensity Index

Sources: ComScore; Economist Intelligence Unit; Euromonitor; Gartner; International Telecommunication Union; Magna Global; Ovum; Pyramid Research; Speedtest.net; United Nations; World Bank; World Economic Forum; BCG analysis.

Note: The index is scaled so that the geometric mean is 100 for 34 OECD countries in 2011.
oon), and also above two BRICI countries (India and Indonesia). It is on a par with Angola, and slightly below three other African countries (Algeria, Botswana, and Morocco). Mauritius, South Africa, and Tunisia are the strongest performing African countries, with scores of 35, 35, and 31, respectively. Broadening the comparison to the Middle East and North Africa (MENA) region, Egypt is the weakest performer: the United Arab Emirates (scoring 85), Saudi Arabia (scoring 64), and Turkey (scoring 61) are the clear leaders.2

Egypt’s e-intensity score grew at an annual rate of 42 percent between 2009 and 2012. (See Exhibit 8.) This is significantly higher than the growth of the OECD countries’ average score (14 percent annually) as well as that of the full-survey (85 markets) average (24 percent annually). Egypt’s growth rate is higher than both the United Arab Emirates (24 percent) and Saudi Arabia (27 percent). If all countries continue on a similar trajectory, Egypt’s score could be about 40 percent of the OECD average by 2020.3

Analyzing Egypt’s performance along the three dimensions of Internet intensity—enablement, engagement, and expenditure—and along their underlying metrics reveals a more detailed picture, with clear opportunities for improvement as well as significant achievements. (See Exhibit 9.)

**Enablement.** The Nordic countries as well as Southeast Asian markets (such as Hong Kong and South Korea) fare particularly well on this dimension. Egypt’s enablement score of 14 is just one-third of the full survey average of 44. Compared with the BRICI and MENA countries, Egypt also performs weakly in this dimension, ahead of just Indonesia, Algeria, and India. This score is a result of low rankings across all the metrics used, although Egypt fares particularly poorly on upload and download speeds, which are key enablers of both engagement and expenditure. For example, in October 2012, Ookla reports an average download speed in Egypt of 1.2 Mbps, compared with top performers Hong Kong (42.7 Mbps) and South Korea (34.2 Mbps). In the MENA region, the United Arab Emirates ranks highest with an average download speed of 11.9 Mbps. Egypt is on a par with Algeria. Meanwhile in the BRICI region, the range is 16.4 Mbps (Russia) to 2.3 Mbps (Indonesia).4

Egypt’s performance is slightly stronger when it comes to mobile broadband. According to the ITU, there were 21 active mobile broad-

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**EXHIBIT 8 | Egypt’s e-Intensity Growth Has Outpaced the OECD and Full-Survey Averages**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Egypt</strong></td>
<td>7</td>
<td>11</td>
<td>15</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td><strong>Saudi Arabia</strong></td>
<td>64</td>
<td>53</td>
<td>44</td>
<td>52</td>
<td>24</td>
</tr>
<tr>
<td><strong>UAE</strong></td>
<td>85</td>
<td>70</td>
<td>111</td>
<td>125</td>
<td>24</td>
</tr>
<tr>
<td><strong>Full survey</strong></td>
<td>56</td>
<td>40</td>
<td>37</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td><strong>OECD</strong></td>
<td>44</td>
<td>56</td>
<td>70</td>
<td>111</td>
<td>14</td>
</tr>
</tbody>
</table>
| **Sources:** ComScore; Economist Intelligence Unit; Euromonitor; Gartner; International Telecommunication Union; Magna Global; Ovum; Pyramid Research; Speedtest.net; United Nations; World Bank; World Economic Forum; BCG analysis.  
**Note:** The exhibit shows population-weighted averages.
band subscriptions per 100 inhabitants in Egypt in 2011, compared with just 8 per 100 inhabitants in Morocco and 9 per 100 inhabitants in Turkey. But when broadening the comparison to include, for instance, Nordic countries like Finland and Sweden (where there are 87 and 92 active mobile broadband subscriptions per 100 inhabitants respectively), Egypt lags significantly behind.

The annual growth rate of Egypt’s enablement score is strong—41 percent per year between 2009 and 2012. Within the same time frame, the metric on which Egypt’s performance increased the most is mobile broadband use; Egypt’s ranking improved from 74 to 70 out of 85 nations. Meanwhile, with other countries catching up, Egypt has slipped down the ranks (from 66 to 79 out of 85 nations) in terms of smartphone sales as a percentage of mobile phone sales.

**Engagement.** Egypt scores relatively well on this dimension, ranking 69 out of 85 nations in 2011. But, even so, in a comparison with the BRICI and MENA countries, Egypt only outperforms India, Indonesia, and Algeria.

Not surprisingly, Internet use by the general population in Egypt has been growing: the revolution opened the eyes of many Egyptians to its potential. The images and videos captured by point-and-shoot cameras and mobile phones were shared among Arab nations and the rest of the world. Between 2009 and 2011, Egypt’s engagement score grew at an annual rate of 12 percent, accelerating to 23 percent between 2011 and 2012.

Egypt’s engagement score has been held back by the low level of adoption of the Internet by businesses. For example, MCIT reports that less than half (45 percent) of Egyptian businesses use the Internet, while the United Nations reports that 92 percent or more of businesses in Israel and the United Arab Emirates do. Use differs by activity: in 2011, 18 percent of Egyptian businesses reported providing goods or services online, while just 14 percent used the Internet to recruit employees and only 13 percent turned to the Internet to train employees.

On the other hand, Internet use among the general population in Egypt is quite high. According to a 2010 survey by TNS, Egyptian Internet users have the highest Internet use in the MENA countries covered, with users spending an average of 18 hours per week online, and with 56 percent of users classified...
as being highly engaged in digital activities. This puts Internet use and engagement in Egypt above that in some large European countries, such as Spain, where the average time spent online is 12 hours per week, and only 37 percent of the Internet population are heavy users.

The Egyptian government also makes use of the Internet—to provide e-government service offerings and to offer points of interaction with both individuals and businesses. The Egyptian e-government portal (egypt.gov.eg) currently receives about 1 million visits a month, from individuals and businesses combined. The site provides Egyptians with key services, such as the opportunity to pay telephone bills online, reserve train tickets, request replacement ID cards, and obtain birth and marriage certificates. According to MCIT, 13 percent of businesses reported that they used e-government services in 2011.

However, since 2010, the Egyptian government has not kept pace with e-government developments in other countries. In the most recent United Nations’ survey of e-development among governments around the world, Egypt’s rank fell from 86 (in 2010) to 107 (in 2012) out of 193. The Seychelles, which integrated its education, health, and finance services into e-government in 2012, now leads the United Nations’ rankings in Africa. Mauritius, which expanded its e-government services to include booking appointments for vehicle inspections and applying for work permits in 2012, captured second place in Africa in the United Nations’ rankings.

When it comes to Internet use in government-run schools, Egypt scores relatively poorly. According to MCIT, just 51 percent of government-run schools were connected to the Internet in 2010 (the majority using dial-up connections). And in the World Economic Forum’s latest (2012) Global Information Technology Report, the Egyptian government earned a low ranking on this metric, coming in 107 out of 142 countries—behind Botswana, Kenya, and Morocco, and in line with Nigeria and South Africa. But improvement in this area is a clear priority for Egypt’s government. In April 2011, the government announced that it would provide £150 billion, over the next five years, to build new schools—and investment in IT is expected to be a significant part of that endeavor.

Expenditure. Egypt clearly scores worse when it comes to expenditure on the Internet than it does on enablement or engagement. The same holds true whether Egypt is compared with all the markets in our survey or just with the BRICI and MENA countries. Egypt’s performance is weak both in terms of the amount of money consumers spend on retail online and in terms of how much is spent on online advertising.

The Egyptian government portal receives about 1 million visits a month.

When it comes to the amount of money consumers spend on retail purchases online, Egypt’s rank is 80 out of 85 nations. Online retail spending in Egypt is estimated to be 0.2 to 0.3 percent of total retail spending, compared with an average of 0.9 percent among African countries, 0.8 percent in Turkey, 1 percent in the United Arab Emirates, and an average of 1.9 percent across the G-20.

Among the reasons why e-commerce has not taken hold in Egypt are the small percentage of people who use banking and credit cards; limited local e-commerce offerings; lack of consumer awareness of and confidence in online purchasing; and weak logistic infrastructure to enable e-commerce transactions. In the World Bank Group’s 2012 Logistic Performance Index, which measures the logistics “friendliness” of 155 countries, Egypt ranked 57—well below Saudi Arabia (37) and Turkey (27). Egypt’s score was just 63 percent of that of the highest performer (Singapore).

It is highly likely that the growth of credit and debit card use in Egypt will increase e-commerce in the country. In general, online retail spending is closely correlated with the percentage of the population that has credit
and debit cards. In 2011, just 1.4 percent of the Egyptian population over age 15 had a credit card and 5.1 percent had a debit card.7 By contrast, these figures are 51.6 percent and 87.6 percent, respectively, in the United Kingdom, and 56.4 percent and 57.9 percent, respectively, in South Korea—both leaders in terms of online retail spending as a percentage of total retail spending. Egypt also lags behind the more advanced economies in the MENA region—for example, Saudi Arabia, where 16.9 percent and 42.3 percent of the population over age 15 have a credit or debit card, respectively, and the United Arab Emirates, where 30 percent and 55.4 percent have a credit or debit card, respectively.

Egypt fares slightly better when it comes to a comparison of money spent on online advertising versus money spent on advertising overall—ranking 75 out of 85 nations. Magna Global reports that, in 2011, of the £14.5 billion total spent on advertising in Egypt, just £0.5 billion (4 percent) was spent on online advertising. This number does represent a 61 percent increase in spending on online advertising from 2010, however, and Magna Global predicts that, by 2017, 13 percent of the money spent on advertising in Egypt will be for advertising on the Internet.8

**Regional Differences Within Egypt**

While BCG’s e-Intensity Index reveals much information about Egypt’s standing in comparison with other countries around the world, it does not explore the broad differences in Internet adoption and use among various regions within Egypt. To understand the Internet’s influence within a country, BCG created a regional e-Intensity Index; it uses the same structure and methodology as the global index.

Not surprisingly, Greater Cairo emerges as the region with the highest score on the e-Intensity Index, followed by Alexandria and the North Coast and then by the Suez Canal and Red Sea region. (See Exhibit 10.) Upper Egypt and the Delta region did not score as well, both because of low infrastructure levels (especially when it comes to fixed and mobile broadband access) and low online expenditure. Illegal broadband sharing is not taken into account in this calculation but it is especially significant in the Delta region, in which the ratio of illegal sharing to paid subscriptions was estimated to be 7:1 in 2009, compared with the national average of 2:1—a national average that is reported to remain the same today.

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**EXHIBIT 10 | There are Disparities in Internet Intensity Across Regions**

<table>
<thead>
<tr>
<th>Region</th>
<th>e-Intensity Score</th>
<th>Infrastructure</th>
<th>Online Business Activity</th>
<th>Online Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandria and the North Coast</td>
<td>101</td>
<td>High</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Upper Egypt</td>
<td>79</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Delta</td>
<td>76</td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Greater Cairo</td>
<td>107</td>
<td>High</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Suez and the Red Sea</td>
<td>93</td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

Sources: TNS; Mobinil; Etisalat; Nielsen; BCG analysis.
Interestingly, the overall score a region receives does not necessarily indicate the extent of Internet usage by the general population within that region. For example, the Delta region, which received the lowest e-intensity score, has the third most active Internet community in Egypt (after Greater Cairo and the Suez and Red Sea region), as measured by population accessing the Internet and number of hours spent online. Nielsen reports that in 2011, urban Internet use in the Delta region was 47 percent—second only to Alexandria (48 percent). The average across Egypt is 44 percent. Further, Internet users in the Delta region spend about 16 percent more time online than Internet users throughout Egypt. Clearly there are regions in which Internet use is deep, if not broad.

There are regions in Egypt where Internet use is deep, if not broad.

However, business use of the Internet is much more closely aligned to a region’s score on BCG’s regional e-Intensity Index. Included in the calculation is the share of businesses that have their own websites, that are commercially active, and that advertise online. Both Greater Cairo and Alexandria and the North Coast, which dominate the regional rankings, have a dynamic and entrepreneurial Internet industry.

Certainly, the concentration of several Internet businesses in a given region generates positive effects—such as attracting Internet-savvy individuals to the area and fostering mutual exchange of innovative business ideas. Consequently, large urban business areas with their highly educated populations are more likely to appeal to Internet companies—which, in part, explains why businesses in other regions have not yet fully embraced the Internet’s commercial opportunities.

Notes
1. BCG’s 2012 e-Intensity Index comprises the latest available data—in most cases, 2011 data. Similarly, each of BCG’s 2009–2011 indexes comprises data from the preceding year.
2. In this report, when we refer to the MENA region, we include markets represented in BCG’s e-Intensity Index: Algeria, Egypt, Morocco, Saudi Arabia, Tunisia, Turkey, and the United Arab Emirates.
3. We considered annual growth rates for the past three years for Egypt and the annual growth rate of the average OECD score. We then projected the deceleration of these growth rates over a period of eight years.
4. Data in this paragraph, which was obtained on October 16, 2012, is based on thousands of recent test results from netindex.com and Speedtest.net—indexes produced by Ookla that compare and rank consumer download and upload speeds around the globe. The value is the rolling mean throughput in Mbps over the past 30 days, where the mean distance between the client and the server is less than 300 miles.
5. Digital Life is a TNS survey, conducted in 2010, of almost 50,000 consumers across 46 countries.
9. The data in this paragraph refer to Alexandria only (not to Alexandria and the North Coast).
GROWTH PROSPECTS
EGYPT’S INTERNET ECONOMY

AFTER A DECADE OF continuous improvement in Internet infrastructure and rapid growth in the number of Internet users, Egypt’s Internet economy is at a crossroads. It now has the potential, with sufficient continued investment, regulatory reform, and increased business adoption, to emerge from its nascent phase into a flourishing consumption-fueled economic sector.

To get a better understanding of the likely future size of Egypt’s Internet economy, we conducted analyses based both on current trends and on benchmarks with other, more advanced, markets. The actions and responses to those trends by the government, private companies, and individuals, however, will have a strong influence on these growth prospects as the Egyptian Internet economy matures.

Over the next five years, there will be three primary drivers of growth: unlocking the potential of e-commerce, promoting e-inclusion, and building business engagement. If progress is made across these three fronts, we project dramatic growth in Egypt’s Internet economy—22 percent per year in nominal terms (equivalent to 12 percent per year after adjusting for inflation), which is significantly above the growth rate of the economy at 15 percent per year in nominal terms. It is also significantly above the projected average annual growth rate of the developing markets of the G-20 between 2010 and 2016 (18 percent), and almost three times the growth rate of developed markets of the G-20 over the same period (8 percent). We also forecast that the Internet economy could contribute 1.6 percent of Egypt’s GDP by 2017. (See Exhibit 11 and the sidebar “Assumptions for Growth.”)

The extent to which the country harnesses these drivers and grasps this opportunity will depend on several key success factors.

The Potential of e-Commerce
Over the next five years, increased consumer participation in e-commerce will probably be the largest driver of growth for the Internet economy in Egypt. In the absence of a fully developed modern trade sector, e-commerce will enable people throughout Egypt to purchase a wide range of goods that would be difficult to procure in brick-and-mortar shops.

We anticipate that Egypt’s e-commerce, which now represents about 0.2 to 0.3 percent of retail spending, could grow to 0.9 percent of retail spending (the equivalent of £14.5 billion in nominal Egyptian pounds, or £8.5 billion in 2011 Egyptian pounds) by 2017. This aligns with the growth of e-commerce in other markets over the past five years.

Drawing lessons from other, more advanced e-commerce markets, we identified three major...
steps that would both promote the growth of e-commerce and build high-speed Internet access in Egypt over the next five years: increasing consumer confidence in e-commerce, making it easier and more natural to pay online, and accelerating the momentum toward entrepreneurship within the Internet economy.

Increasing Consumer Confidence in e-Commerce. According to an MCIT survey in 2009, lack of knowledge about the existence and benefits of e-commerce, is by far the major reason that Egyptians do not make purchases over the Internet. In addition, consumers do not trust the e-commerce process and providers. And while increasing consumers’ comfort level with buying online will be the primary driver of e-commerce, this change will not come easily; building confidence in e-commerce will require continuous and long-term efforts on the part of all stakeholders—public entities as well as private companies in the sector, telecom operators, and financial institutions.

Making It Easier and More Natural to Pay Online. There is no doubt that facilitating online payment will greatly accelerate the growth of e-commerce in Egypt. But in Egypt today, paying for purchases online is not a simple matter. For one thing, less than 15 percent of Egyptians have bank accounts. And the share of the Egyptian population with debit and credit cards is even lower, estimated at 5.1 and 1.4 percent, respectively.

And even for those with debit and credit cards, online payment comes with inconvenience and at a price. In countries in which e-commerce is more developed, such as Brazil, banks have facilitated the use of credit cards and their conditions for online usage. Currently, cardholders in Egypt face a number of restrictions, such as low ceilings on online purchases and limited acceptance of Egyptian credit and debit cards on online payment platforms. In addition, the fees on online payment platforms remain high compared with those in other markets. These fees typically range from 2.5 to 3.5 percent in Egypt, compared with 1 to 1.5 percent in markets such as France, the United Kingdom, or Germany. At the same time, merchants face the difficulty of navigating complex processes when setting up online merchant accounts.

Alternative payment methods—such as mobile payment and prepaid cards designed for online use—can also serve to support the de-
development of e-commerce. Mobile payment, in particular, has the potential to grow much more quickly than “traditional” online payment because of the far greater adoption of mobile services than of banking services in Egypt. The trend toward mobile payment is illustrated by the success of M-Pesa, a mobile payment service launched in 2007 by Safaricom in Kenya. By May 2012, there were 15 million people in Kenya using M-Pesa—almost 50 percent of all mobile device users in the country. This service is now offered in Tanzania and South Africa too. The regulatory framework for online payment needs to accommodate mobile payment—in particular to enable mobile telecom operators to act as money issuers without owning a banking license. To this end, Egypt took an important step in May 2011 when the central bank of Egypt approved allowing mobile network operators, in cooperation with banks operating in Egypt, to offer mobile money transfers.

### Assumptions for Growth

Our estimate that the Egyptian Internet economy will grow 22 percent annually in nominal terms (12 percent annually after adjusting for inflation) is based on the following assumptions.

**Consumption.** Consumers’ Internet transactions and spending to access the Internet are likely to grow by 33 percent annually in nominal terms (22 percent in real terms) until 2017. This growth rate is predicated on two further assumptions. First, that consumer access to the Internet via broadband (considering both fixed and mobile access) will grow by 27 percent per annum until 2017. Second, that e-commerce will represent 0.9 percent of total retail spending, compared with 0.2 percent at year-end 2011.

Assumptions can be slippery things, but these are meant to be reasonable. Our projected broadband-access growth rate is relatively modest compared with the historical trend and prerevolution growth.

**Government Spending.** We project that government spending allocated to the Internet will grow by 11 percent annually in nominal terms (1 percent in real terms), close to that of the private sector. This projection includes government spending on hardware, software, telecommunications and selected services related to the Internet at both the local- and central-government levels. Further, it takes into account government spending on creating an enabling infrastructure for the use of the Internet via investments in the eMISR National Broadband Plan.

**Private Investment.** We forecast that business investment in the Internet will grow by about 12 percent per year in nominal terms between 2011 and 2017 (2 percent annually after adjusting for the effects of inflation). The biggest contributor to future growth will be investments by private businesses outside of the telecom sector. As these companies integrate the Internet into their existing business processes, they will need to invest in hardware, software, telecommunications, and selected services related to the Internet. We anticipate that telecom operators’ investments will remain flat in real terms over the period.

**Net Imports.** We anticipate that net imports of ICT goods and services as well as of goods and services sold commercially over the Internet will grow 21 percent annually in nominal terms (11 percent annually in real terms) over the period, with Egypt importing more ICT goods and services as well as online goods and services than it is exporting. This projection is based on World Trade Organization (WTO) and United Nations Conference on Trade and Development (UNCTAD) projections for Egypt’s growth in exports and imports of ICT goods and services, combined with the assumption that e-commerce imports, as a percentage of goods purchased online, will decline by 4 percent per year.
However this approval was conditional on safety concerns that are still being resolved as well as final National Telecommunications Regulatory Authority (NTRA) clearance being granted, which has not yet been achieved.

Finally, the government can play a role in raising awareness about online and mobile payment. One of the leaders in this field is Singapore, which ranks in the top ten of the United Nations’ world e-government development index in 2012. The country’s e-government portal allows citizens to pay for a wide range of liabilities (including taxes, fees, and fines) and licenses online, and it offers a choice of online payment options (including card payments and one-off Internet banking transfers). Within the MENA region, the Dubai government, in partnership with Etisalat, made it possible, in 2009, to pay small administrative fees (for example, parking tickets) over mobile devices. These types of initiatives are instrumental in enabling Internet users to become accustomed to online payment within a reassuring environment.

Accelerating the Momentum Toward Entrepreneurship. The growth of e-commerce will almost certainly depend on budding entrepreneurs among Egypt’s dynamic young Internet population. Dubai’s Internet City and Australia’s government-backed incubators provide examples of the support vital to entrepreneurial companies that facilitate Internet usage (such as online payment providers, digital agencies, and aggregators) and entrepreneurial companies that provide online content and services for customers. In Egypt, initiatives like the Technology, Innovation and Entrepreneurship Center (TIEC) are following that direction and could be instrumental in the development of e-commerce.

The Importance of e-Inclusion
A key driver for the Internet economy, and for Egypt’s broader economy as whole, is “e-inclusion”—that is, expanding the reach of the Internet across Egypt and, especially, enabling more Egyptians to access the Internet at high speeds through fixed or mobile broadband. Greater broadband access is vital to developing innovative services, e-commerce, online banking, e-health, and e-education.

Our assessment of current limitations on high-speed Internet access in Egypt and initiatives undertaken by other countries to extend the reach of broadband reveals three key success factors for Egypt: expanding Internet and PC literacy, improving the accessibility and the quality of network infrastructure, and increasing the availability of online Arabic-language content.

Growth in e-commerce requires expanding Internet literacy.

Expanding Internet and PC Literacy. In 2012, computer illiteracy and lack of understanding of the Internet’s benefits are the most frequently quoted reasons for not using the Internet. However, as noted earlier, Internet adoption and use strongly varies across Egypt’s regions (with Cairo and Alexandria outpacing the Delta region and Upper Egypt) and social classes (with significantly higher Internet use by the A and B classes than the C and D classes). One way to significantly boost Internet adoption would be to bridge this gap—for example by providing computer education and access to computer equipment in schools and universities. Public-private partnerships could be formed to support school programs of this kind, based on mutual interest in expanding Internet and PC literacy. Mobile operators, for instance, might want to participate in order to encourage widespread wireless access to the Internet.

Improving the Accessibility and the Quality of Network Infrastructure. Much of the Internet economy’s development, and especially the takeoff of e-commerce, depends on increasing the availability of broadband. High-speed access is a must when it comes to online shopping. In turn, increased broadband access is dependent upon an accessible high-quality network infrastructure. In advanced economies, network infrastructure has been enhanced by competition among network operators and the easing of regulatory restrictions—in particular, by allowing
Internet service providers to freely build transmission infrastructure and by enabling local loop unbundling.

Discouraging illegal sharing of broadband connections can also go a long way toward fostering investment in network infrastructure and improving the quality of Internet access and service. Currently, it is estimated that there are between one and two illegal connections for every paid subscription to broadband, a phenomenon that discourages investment in the last miles of the network and drives up prices (especially for high-speed access). The cost of very high-speed Internet access in Egypt is among the most expensive in the region. (See Exhibit 12.) Several steps could be taken, however, to increase the attractiveness of paid access. The most significant would be aggressive price reductions. Other effective initiatives include double- or triple-play offers, the availability of free content, and simplification of the paid subscription process.

Increasing the Availability of Online Arabic-Language Content. Internet users in Egypt prefer Arabic-language content over English-language content. This is true both for general browsing activities (in 2009, a Nielsen report found that 75 percent of Egyptian Internet users preferred browsing in Arabic) and social activities (in 2012, 60 percent of Egyptian Facebook users chose the site’s Arabic version over its English version). Yet only about 1 percent of online content is available in Arabic, while Arabic-speaking Internet users represent 4 percent of total Internet users worldwide. Making Arabic-language content available online will both attract more users to the Internet and increase the demand for high-speed connectivity.

The underdevelopment of online Arabic-language content in Egypt has several causes: the lack of online advertising needed to provide financial support for Arabic-language content; significant piracy issues that discourage investment by local and foreign content owners; and the fact that the Internet is not built to accommodate non-Roman characters such as those used in writing Arabic.

Under the government’s supervision, several content-production and digitalization initiatives are under way to increase Arabic-language content (including foreign content) on the Internet. Pursuing these efforts to produce or translate content should make a real difference in expanding availability—especially if conducted through private-public partnerships.

**EXHIBIT 12 | In Egypt, the Cost of Very High-Speed Internet Access Is Among the Highest in the Region**

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<th>1 MBps</th>
<th>4 MBps</th>
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<td>Egypt</td>
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<td>52</td>
<td>70</td>
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<tr>
<td>Morocco</td>
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<td>20</td>
<td>40</td>
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<tr>
<td>Turkey</td>
<td>not offered</td>
<td>not offered</td>
<td>23</td>
</tr>
</tbody>
</table>

**Sources:** TE-Data; Menara Telecom; TTnet; International Monetary Fund; BCG analysis.
**Note:** The monthly subscription prices cited here are the least expensive offered by any Internet service provider in each country as of October 2012.
In addition, creating an environment that is protective of intellectual property rights would go a long way toward encouraging investment in, and enabling the growth of, online Arabic-language content. Making progress on this front would require formulating a framework to protect intellectual property rights for online content and increasing awareness of online intellectual property rights issues.

The Value of Expanded Business Engagement

Increased business engagement over the Internet—the fourth primary driver of growth in Egypt’s Internet economy—could add substantially to Egypt’s GDP by the year 2017. The Internet enables exporting companies to expand their reach—either by selling directly to customers in more developed markets or by expanding their marketing efforts through third-party websites such as marketplaces. In doing so, the Internet provides an avenue for capturing greater market share and increasing margins.

There are several ways to encourage traditional businesses to embrace the Internet. First, raising SME awareness of the benefits to be gained—especially those benefits that derive from leveraging advanced online marketing tools such as B2B marketplaces and search-engine marketing. Second, providing support to businesses engaged in online exports—for example, through measures such as subsidization or special tax conditions. Such support can bring significant returns, as demonstrated by initiatives currently under way to develop Egypt’s ICT exports. Third, adopting a sector-specific approach to seizing the business benefits of the Internet can ensure that specific needs are tended to properly—for example, supporting clusters of companies within sectors by leveraging public-private partnerships with key industry players. Finally, streamlining processes will remove significant barriers to businesses’ first steps online—for example, enabling businesses to register their websites online and removing the requirement that a business secure a trademark before launching its website.

After a decade of investment in infrastructure and enablement, Egypt is poised to take the next steps toward a thriving Internet economy. At this significant crossroads lies a major opportunity: the country can surge forward on the ingenuity of its young, growing, Internet-enthusiastic population to claim a strong regional and global position. Now is the time to act.

Notes
1. Nominal growth refers to growth without adjusting for inflation.
3. Interviews conducted in 2010 with large online players in Egypt and Europe.
4. This information is based on a survey by the Arab Advisors Group, *Egypt Internet Users and e-Commerce Survey 2012*, March 2012, in which members of households in which at least one person did not access the Internet were asked for reasons for not using the Internet. The most frequently quoted reasons were computer illiteracy (40 percent of respondents) and no perceived need to use the Internet (37 percent).
5. The data on language preferences for browsing and Facebook usage are based on Nielsen, *Internet Profiling—A Syndicated Study on the Internet Market in Egypt*, September 2009; and the Dubai School of Government, *Arab Social Media Report*, July 2012, respectively. Facebook, the popular international social networking website, reached 1 billion users worldwide in October 2012.
The assumptions and analyses that form the basis for this report are outlined below.

**e-GDP**

We used the expenditure method of calculating e-GDP, which measures total spending on finished goods and services. The assumptions outlined in the main report are not repeated here.

**Consumption.** We estimated online spending on the basis of the *Consumer Barometer*, January 2012 (a study of consumer online behavior jointly conducted by IAB Europe, TNS Infratest, and Google).¹

Spending on access includes the following: consumers’ payments to fixed and mobile Internet-service providers; fees paid at cybercafés and IT clubs; and a proportion of the cost of interface devices (such as computers or Internet-enabled mobile phones).

Our estimates for spending on access are based on research reports and data from the Economist Intelligence Unit (EIU), Euromonitor International, Ovum, Nielsen, Gartner Market Statistics, the Ministry of Communications and Information Technology (MCIT), and BCG internal analysis.

**Private Investment.** We included the total value of fixed telecom investments—on the theory that they are all needed to maintain and facilitate broadband services—and a portion of mobile telecom investments, corresponding to the deployment and maintenance of the 3G network.

We included a portion of private non-telecom companies’ investments in hardware, software, telecommunications, and selected IT services. Our estimates are based on research by Gartner Market Statistics and statistics from MCIT and the EIU. Our allocation to the Internet is based on an estimate of the connectivity of private sector companies, so as to reflect the extent to which their spending on information and communications technology (ICT) will enable them to use the Internet; it is based on data from the EIU, Ovum, and MCIT. We did not include an estimate for internally developed software, even though it probably represents a significant element of Internet-related capital expenditure, because too many assumptions would have been necessary.

**Government Spending.** We estimated public spending on ICT, including hardware, software, telecommunications, and support services. We also included an estimate of spending by the government of Egypt on the eMisr National Broadband Plan, on the ground that this investment is required to maintain and expand Egypt’s broadband infrastructure. Our estimates are based on

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¹ Consumer Barometer, January 2012 (a study of consumer online behavior jointly conducted by IAB Europe, TNS Infratest, and Google).
research by Gartner Market Statistics, data from the EIU, and information provided by MCIT and the National Telecommunications Regulatory Authority (NTRA).

Net Exports. We estimated exports and imports of Internet related ICT goods and services based on World Trade Organization (WTO), United Nations Conference on Trade and Development (UNCTAD), MCIT, and EIU statistics. We calculated e-commerce imports from an estimate of the overall size of the Egyptian e-commerce market and data on the country’s propensity to import from the WTO and Egypt’s Ministry of Planning.

e-GDP growth
We estimated the growth in consumption by forecasting online consumer spending and spending on access fees and devices for fixed and mobile connection to the Internet. Our consumer-spending estimate is based on projections of broadband connection penetration, which correlates to the share of e-commerce as a percentage of total retail spending. Our estimate of spending on Internet-related fees is based on Ovum forecasts of revenues from fixed and mobile broadband connections, and projections of dial-up and public access usage and fees. We estimated consumer spending on devices to access the Internet on the basis of forecasts by Gartner Market Statistics, in conjunction with data from the EIU, Ovum, and MCIT.

Our estimates of growth in private sector investment are based on forecasts by Gartner Market Statistics (for private sector ICT investment) and broker reports (for telecom investments), which we used to build our baseline estimate.

We used research by Gartner Market Statistics in our estimate of government spending on ICT goods and services related to the Internet, and MCIT and NTRA information in our prediction of government spending on the eMisr National Broadband Plan.

e-Intensity
We formed the overall international and regional indexes as a weighted mean of three subindexes: enablement, engagement, and expenditure. The engagement subindex is formed as an equally weighted mean of three further subindexes: businesses, consumers, and government. All of the subindexes are then formed as weighted means of several underlying metrics. (See the exhibit “The Structure of the e-Intensity Index.”)

Data are not available from the same source for every single metric and country for the international index. For countries with an OECD data set, we imputed the missing data through regression, using metrics that are strongly correlated. For all other countries, we approximated their position on the index. To do this, we calculated a score for these countries using aligned metrics but alternative data sources. We then transformed these scores using common data points between the two data sets.

We transformed the data so that the indexes would measure proportional differences in data. To ensure intuitive interpretation, we then transformed the indexes and scaled them so that a reference value—the geometric mean of each index—was set to 100 in the 2011 version of the index. The same scaling factors were used for other years.

We also tested how sensitive the country rankings were to changes in the weights and choice of metrics by carrying out a Monte Carlo simulation using random weights and variables. The interquartile ranges were very small when a metric was randomly omitted and the rankings proved to be fairly insensitive to weightings.

NOTE
1. Our estimate of online spending covers 20 sectors, including groceries, health-related products, household goods, clothing and footwear, consumer electronics, and travel.
The Structure of the e-Intensity Index

Enablement (50%)
- Broadband penetration and average speeds

Engagement (25%)
- Extent to which consumers, businesses, and government use the Internet

Consumers (33%)

Businesses (33%)

Government (33%)

Expenditure (25%)
- Online sales and online advertising

Enablement
- Secure Internet servers per 1 million inhabitants (8%)
- Upload and download speeds (17%)
- Smartphone sales as a percentage of mobile phone sales (17%)
- Total mobile broadband subscriptions as a percentage of the population (17%)
- Household fixed-broadband access (17%)
- Business fixed-broadband access (17%)
- Internet bandwidth per person (8%)

Businesses
- World Economic Forum’s extent of business Internet use score (25%)
- Percentage of businesses with a website (25%)
- Percentage of businesses buying online (25%)
- Percentage of businesses using the Internet (25%)

Consumers
- Percentage of population that uses the Internet (50%)
- Nine measures of the portion of the population that has performed various activities online (50%)

Government
- Internet access in schools (33%)
- United Nations’ online service scores (33%)
- United Nations’ e-participation index (33%)

Expenditure
- Online retail as a percentage of total retail (50%)
- Online advertising as a percentage of total advertising (50%)

Source: BCG analysis.
Note: Some numbers do not appear to add up because of rounding.
NOTE TO THE READER

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