

# The G20 e-Trade Readiness Index

An Economist Intelligence Unit report



Commissioned by

**ebay inc**<sup>™</sup>

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## About the report

*The G20 e-Trade Readiness Index* is an Economist Intelligence Unit report, commissioned by eBay Inc. The report is based on a quantitative index ranking of countries on the degree to which they encourage—through policy, regulation and infrastructure—cross-border trade using the Internet. The index comprises more than 40 indicators across five thematic categories: investment climate, Internet environment, international trading environment, regulatory and legal framework, and the environment for e-payments. The categories within the index are weighted according to our assumptions of their relative importance in facilitating cross-border trade using the Internet, especially for small and medium-sized enterprises (SMEs).

The index focuses on the G20, though for the purposes of this research we have excluded the EU as a separate entity in the rankings, hence only 19 countries are ranked.

In addition to analysis of the index findings, this report is based on wide-ranging desk research and interviews with experts on the challenges and opportunities in cross-border online trading. The Economist Intelligence Unit bears sole responsibility for the content of this report. The findings do not necessarily reflect the views of the commissioner. Christopher Clague was responsible for the index design. Diane Alarcon was the author of the report and Laurel West was the editor.

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- Bruce Gosper, chief executive officer, Austrade
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## Defining e-trade readiness

The rise of Internet access during the past two decades is transforming global trade dynamics. Today firms of all sizes can take advantage of information and communications technologies (ICT) to conduct trade across international borders. But Internet access and entrepreneurial spirit are only two parts of the equation. For trade to flourish there must also be a favourable policy and regulatory

environment. In this report, e-trade readiness refers to the extent to which countries create such an environment to support ICT-enabled commerce across borders. The five factors that determine this environment are the overall investment climate, Internet environment, international trading environment, regulatory and legal framework, and e-payments environment. ■



## Executive summary

The Internet is creating economic value beyond the technology sector with companies in traditional industries capturing as much as 75% of the benefits, according to the McKinsey Global Institute, a research firm.<sup>1</sup> In particular, it is redefining the way goods, services and information are produced, consumed and traded, not least by making it easier for individuals and small and medium-sized enterprises (SMEs) to participate in international trade from which they have traditionally been excluded.

A recent report by the European Commission shows the Internet effectively reduces the distance between providers and consumers,<sup>2</sup> and that a dynamic e-trade environment coupled with more Internet users makes it possible for SMEs to compete with multinational companies in certain segments.

Yet, significant challenges to ICT-enabled cross-border trade remain. One is the actual movement of products across borders under customs regimes that are more aligned with the needs of big business than with SMEs that are trying to avail themselves of the opportunities presented by online trade. Another is online payment systems, whether electronic (e-payments) or mobile (m-payments). Today the payments market is highly fragmented and haphazardly regulated; mature, international systems figure

prominently in developed countries whereas emerging markets are developing new platforms, often using mobile networks. While these systems could potentially level the playing field for SMEs by decreasing transaction costs, they pose fundamental new challenges with regard to their regulation and adoption by consumers and SMEs. Among the emerging challenges is protectionism, which has stepped into the limelight because of fears about data privacy and cyber-security. Though governments have yet to pass legislation introducing protectionist policies such as requirements to store data locally, there is talk of doing so. Such policies could stem the free flow of information, goods and services, in particular for SMEs, which may find it harder than large multinationals to spend the time and money to adapt to new rules.

It is clear that technology alone is not enough to allow ICT-enabled trade to reach its full potential. Instead, trade flourishes in countries where the overall investment climate is positive, where there is widespread and high-quality Internet access and people with the skills to take advantage of this, and where the regulatory and legal frameworks and environment for e-payments are well developed and up to date. This report, based on a quantitative benchmark called the G20 e-Trade Readiness Index, looks at all of these factors in examining how the G20

<sup>1</sup> Matthieu Pélassié du Rausas, James Manyika, Eric Hazan, Jacques Bughin, Michael Chui, Rémi Said, "Internet matters: The Net's sweeping impact on growth, jobs, and prosperity", McKinsey Global Institute, May 2011

<sup>2</sup> Bertin Martens, "What Does Economic Research Tell Us about Cross-border e-Commerce in the EU Digital Single Market?", European Commission, Joint Research Centre, 2013

countries encourage or discourage ICT-enabled cross border commerce—or e-trade.

The Index finds that the G20 countries are at vastly different stages in the development of environments conducive to greater cross-border e-trade. Among the key findings of the research are the following.

● **Australia is best prepared to grow global ICT-enabled commerce.** Australia ranks top in the e-Trade Readiness Index based on strengths across all five categories measured, particularly in the Internet environment and e-payments environment. Australia has affordable Internet access, a well-developed regulatory framework for commerce, high usage of electronic payment methods and high smartphone penetration. The US is second in the Index, followed by South Korea, the UK, and Japan, suggesting that richer countries, on average, have an atmosphere conducive to e-trade (the correlation between GDP per capita and overall ranking is high at 0.84). Geography and history also seem to encourage the development of e-trade—three out of the top five countries (Australia, the UK, Japan) are both developed and island nations whose economies have long relied on international trade. Australia can continue to improve should it have more competitive domestic and international shipping systems.

● **China's e-trade potential looms large, but regulatory challenges restrict its global role.** The country's overall ranking (9th) is held back by the Internet environment (13th) and the regulatory and legal frameworks (12th) for international e-trade. However, the potential for global ICT-enabled commerce seems enormous if China can improve the operating environment. In 2012, domestic online consumption as a percentage of retail sales accounted for as much and possibly more in China as it did in the much richer US (5-6% vs 5%), despite the fact that China's Internet penetration level is only about 42%, according to the McKinsey Global Institute<sup>3</sup> and the World Bank.<sup>4</sup> China's growing middle class is also getting wealthier and will

continue to make it an important new market for producers around the world.




















● **E-trade opportunities for small businesses are largely consumer-driven and the current international trading system is not geared to accommodate this.** Traditionally, companies have decided to export to selected markets after careful research, forecasting and distribution planning. Today, a consumer-driven model has emerged where potential buyers are approaching sellers to offer products in markets that previously may not have been considered. But how SMEs are able to exploit these opportunities is often dictated by customs and logistical constraints. For example, SMEs tend to ship smaller parcels to different locations and cannot necessarily benefit from cost savings from shipping in bulk. Moreover, customs clearance

## Rankings overview table

The e-Trade Readiness Index

Scored 0-100 where 100 = most enabling for e-trade

OVERALL SCORE

1		Australia	67.5
2		US	66.9
3		South Korea	66.4
4		UK	64.2
5		Japan	62.0
6		Germany	61.9
7		Canada	61.8
8		France	54.5
9		China	51.7
10		Italy	45.0
11		Saudi Arabia	44.8
12		Mexico	44.3
13		Brazil	41.4
14		South Africa	39.9
15		Turkey	38.6
16		Russia	38.1
17		India	37.9
18		Indonesia	37.7
19		Argentina	37.5

<sup>3</sup> Richard Dobbs, Yougang Chen, Gordon Orr, James Manyika, Michael Chui, Elsie Chang, "China's e-tail revolution," McKinsey Global Institute, March 2013

<sup>4</sup> World Bank data

can be more trouble than it is worth for small shipments (though countries in Latin America are successfully addressing this issue by waiving clearance requirements for small packages).

● **Emerging markets have the potential to be a source of innovation in ICT-enabled commerce.** Developed countries may lead the e-Trade Readiness Index today but developing economies are finding innovative ways to enable domestic e-commerce and these may lead to changes in how e-trade occurs. In Africa, local entrepreneurs have created mobile payment systems, opening up new opportunities for many entrepreneurs. Some of this technology is now spreading around the world, although openness and interoperability issues remain. In Brazil, measures to lower the weight and value limits at which packages must be inspected at customs

have resulted in almost 11,000 new exporters and more than 120,000 shipments since its inception in 1999. In 2012, the value of simplified exports reached US\$272m.<sup>5</sup>

As the Internet population is set to rise from 2.7bn today to about 5bn in 2020,<sup>6</sup> the potential global market for many companies should expand. This benefits all companies, but particularly small ones that were previously limited by size or geographic location. However, with new opportunities come new challenges (and some old ones, too). Governments that understand the factors that facilitate ICT-enabled trade and work to improve it are set to gain the most. Emerging markets, where the lack of legacy regulation could make it easier to develop and implement new solutions, have perhaps the most to gain.

<sup>5</sup> "Reunión del Grupo Técnico Ejecutivo sobre Integración Comercial por Envíos Postales", The Initiative for the Integration of the Regional Infrastructure of South America, Sept 2013

<sup>6</sup> "The World in 2014: ICT Facts and Figures", International Telecommunication Union, 2014; Joshua Meltzer, "The Internet, Cross-Border Data Flows and International Trade", *Issues in Technology Innovation*, Center for Technology Innovation at Brookings, Feb 2013

# Introduction

The growth in electronic trade (e-trade) has radically transformed international commerce as entities that traditionally have lacked access to world markets are now engaging in cross-border trade. This rapid rise in online commerce is attributed to greater access to information and transparency, both for suppliers and consumers. For them, the Internet often surpasses geographic, linguistic and cultural barriers that would have prevented such transactions just a few years ago.

Although there is no comprehensive data specific to cross-border e-commerce, it is clear that consumers have taken to online shopping with gusto. In 1999, approximately 300m people had Internet access globally, nearly 25% of them made an online purchase that year and total e-commerce sales were US\$110bn, according to the World Trade Organization (WTO).<sup>7</sup> By the end of 2014, there will be almost 3bn people online. Forty per cent of them will participate in online commerce,<sup>8</sup> and global business-to-consumer (B2C) sales are expected to surpass US\$1.5trn, including domestic and international transactions.<sup>9</sup> As more people come online, B2C e-commerce, which today is roughly one-tenth of the online business-to-business (B2B) market, is expected to grow more quickly. SMEs, which are the backbone of the world economy, stand to benefit hugely if they can seize the potential

offered by ICT, not only within their domestic markets but internationally.

## Beyond access

Increasing Internet access is the most obvious factor underpinning the growth in e-commerce generally, including cross-border trade. But there are numerous other issues which play a role in determining whether a country's e-trade reaches its full potential. In producing this report we have drawn together data on all of these factors to create the G20 e-Trade Readiness Index, a ranking of the G20 countries (excluding the EU as a separate entity) on their readiness to exploit the potential of ICT-enabled trade.

The overall investment climate is one factor measured by the Index. While e-trade opens up new opportunities and overcomes some traditional obstacles for business, some old challenges remain. For SMEs in particular, access to finance is often cited as a barrier to entry or constraint to growth. E-commerce businesses, many of which are SMEs, are no exception. In addition to constraints posed by the domestic financial markets, countries can impose protectionist measures limiting foreign investment. Telecommunications infrastructure is another important component of a positive investment climate for e-trade. Australia, which tops the Index, has made

<sup>7</sup> "E-commerce in developing countries: Opportunities and challenges for small and medium-sized enterprises", World Trade Organization, 2013

<sup>8</sup> "Global ecommerce penetration by country: 2013", Digital Strategy Consulting, Aug 2013

<sup>9</sup> "ITU releases 2014 ICT figures", International Telecommunication Union, 2014; "Global B2C Ecommerce Sales to Hit \$1.5 Trillion This Year Driven by Growth in Emerging Markets", eMarketer, Feb 3, 2014

a long-term commitment to Internet access through the National Broadband Network. Although there have been concerns about the implementation of the plan—requiring the use of different technologies—the government’s clear commitment is enough to promote the growth of online businesses and services.

Another factor contributing to a country’s ability to exploit the potential of e-trade is the Internet environment, which refers to the quality of Internet access and the ability of citizens to use it to its full potential. In particular, developing countries with large populations and diverse geographies face difficulties in rolling out infrastructure (supply) and building the human capital (demand) to meet the needs of an e-trade economy. India is often cited for its huge potential due to its large population, rising GDP and current low levels of Internet penetration. But the promise of e-trade has not yet been catalysed. Reliable and affordable Internet access in semi-urban and rural areas and digital literacy are key initiatives that need more attention, according to McKinsey & Company, a global consultancy.<sup>10</sup> In the UK, for example, it is estimated that 21% of adults do not have the skills or ability to communicate via email, use a search engine or conduct transactions online. For the time being, digital divides seem to be widening, especially in emerging markets. In Latin America, for example, it has been found that improved access has not necessarily led to improved usage.<sup>11</sup> Torbjörn Fredriksson, chief, ICT Analysis Section, Science, Technology and ICT Branch of the United Nations Conference on Trade & Development (UNCTAD), explains that the quality of broadband connectivity and its pricing contributes to less Internet usage—and consequently to lower e-commerce—in Latin America.

A country’s international trading environment is a third critical factor for e-trade. The Internet may level the playing field for traders in many respects, but tariffs and customs procedures affecting product delivery time and cost still play

a large part in determining a company’s ability to compete on a global scale. Also, a country’s links into international markets, including physical links such as airline, rail and shipping routes, can facilitate or impede the flow of goods. Developed countries exhibit mature and efficient international trade mechanisms which place them near the top of this category in the e-Trade Readiness Index. The top spot goes to South Korea, which scores among the top three countries for customs efficiency for imports and exports in both cost and the time it takes.

The fourth key factor encouraging e-trade is the regulatory and legal framework. Experts interviewed for this report agreed that trust is a key element for e-trade and that clear regulation helps to build this. Again, developed countries are at an advantage as they tend to have trusted frameworks with well-defined rules and consequences. For example, Germany ranks at the top of this category due to a strong regulatory environment and effective legal framework. Another key dynamic in the regulatory and legal framework is the balance between protection and competition. Bruce Gosper, chief executive officer at Austrade, explains that a significant risk to international e-commerce is that over-taxation or over-regulation could stymie technology and development.

Finally, the availability of e-payments systems is a key contributor to e-trade readiness. As potential consumers spend more time online, the ability of companies to attract attention and simplify purchasing should increase e-trade. Rapid progress is expected in the payments area, where already non-bank companies such as mobile phone operators, technology companies, credit card companies and retailers are providing cheaper and easier payment options.<sup>12</sup> Yet regulators in many countries are still struggling with the question of how to regulate the payments industry. From a policy perspective, the method of payment (e.g., credit card, wire transfer, through a mobile carrier

<sup>10</sup> “India’s Internet Opportunity”, McKinsey & Company, March 2013

<sup>11</sup> “The Global Information Technology Report, 2013: Growth and Jobs in a Hyperconnected World”, INSEAD, World Economic Forum, 2013

<sup>12</sup> “Competition and Payment Systems 2012”, Policy Roundtables, OECD, June 2013

or digital wallet) does not matter as much as supervision and consumer protection. Regulators in Australia, which tops the G20 e-Trade Readiness Index, have recognised this. In 2011 they implemented the ePayments Code, which standardises the regulations for all electronic payment methods.<sup>13</sup>

### Who's ready?

According to the Index, Australia is best prepared to exploit the opportunities presented by ICT-enabled trade. It scores highly in all five categories measured, but particularly in the Internet environment and e-payments, based on its well-defined regulatory environment for e-commerce and widespread usage of electronic and mobile payments. "Australians are easy and early adopters of new technologies and ways of doing things," explains Mr Gosper. He also cites the resourcefulness of businesses and the country's experience of tackling distance, both within Australia and also when looking abroad.

In all, the ranking is dominated by developed economies, with Australia closely followed by the US, South Korea, the UK, and Japan. In fact, the correlation between overall e-Trade Readiness and GDP per capita is 0.84, suggesting a close relationship between higher incomes and an environment conducive to e-trade.

Geography and history also appear to be relevant—three out of the top five countries (Australia, the UK, and Japan) are island nations. According to Tim Harcourt, adjunct professor in International Business Strategy at the Australian School of Business at the University of New South Wales, trade and investment in telecommunications have always been part of Australia's strategy to shorten distances between the island and the rest of the world.<sup>14</sup> Similarly, the UK and Japan have relied on international trade for economic growth.

Emerging markets, such as China, Brazil and Turkey, are experiencing rapid growth in domestic online commerce but their relative weakness in terms of regulatory environment and overall infrastructure to support international e-trade drag down their rankings. They over-perform within the investment climate category in part due to their expanding middle classes, high levels of inward FDI and positive macroeconomic climates. In China, these factors have resulted in the fastest growing online commerce market in the world, set to overtake the US this year or the next.

The next five sections provide greater insights into the categories underpinning the overall findings.

<sup>13</sup> Australian Securities & Investments Commission

<sup>14</sup> <http://blogs.unsw.edu.au/theairporeconomist/blog/2012/06/exporting-and-the-nbn/>

## 1

## Investment climate

INVESTMENT CLIMATE			
1		US	71.4
2		China	66.3
3		Australia	59.8
4		Brazil	52.7
5		Canada	52.1
6		Japan	49.2
7		UK	47.4
8		Saudi Arabia	46.7
9		Germany	46.4
10		Mexico	46.2
11		Indonesia	46.1
=12		Russia	44.6
=12		South Korea	44.6
14		South Africa	44.0
15		India	43.1
16		France	41.5
17		Turkey	38.1
18		Italy	36.1
19		Argentina	32.1

The investment climate category in the G20 e-Trade Readiness Index measures macroeconomic and political stability as well as demographic factors, such as population, median age and education, that affect the risks and returns associated with investment in a

country. To emphasise the role of technology and SMEs, the extent of ICT investment and access to financing for entrepreneurs are also included. Countries that score well in this category are characterised by high levels of technology investment, a large, young and growing middle class and openness to entrepreneurial ventures.

Access to affordable finance remains a key constraint to SME development, especially in emerging economies. According to the International Finance Corporation (IFC), a global financial institution, small firms tend to rely on internal financing more than large companies do, and in low-income countries a small firm is only half as likely to have access to a bank loan as a larger firm.<sup>15</sup> In the context of e-trade readiness, this suggests that there is a need for public and private initiatives to provide small loans to SMEs.

The US ranks first in the investment climate category based on its consumer-driven economy, level of ICT investment and environment for new businesses, with strengths in these categories outweighing the weaknesses in political and macroeconomic stability. China is second due to the size of its rising middle class, strong inbound FDI and spending on telecommunications infrastructure. In 2011, China invested US\$39.6bn in telecommunications services, up 15% from 2010, according to data from the

<sup>15</sup> "Scaling-Up SME Access to Financial Services in the Developing World", International Finance Corp, Oct 2010

<sup>16</sup> ITU World Telecommunication/ICT Indicators database 2013 (June 2013 edition)

International Telecommunications Union (ITU) ICT Indicators database for 2013.<sup>16</sup> Despite a sometimes difficult operating environment, China's consumer market attracts multinationals that are drawn to its growing incomes, urbanisation and appetite for consumer goods.

Australia, the top-ranked country overall, comes third in this category, driven by high scores for political stability (1st), the macroeconomic climate (4th) and education levels (1st) but held back slightly by access to finance for entrepreneurs, where it ranks fifth. This underperformance is well acknowledged—in a recent survey by the Australian Export Finance and Insurance Corporation (EFIC), a government agency, 58% of SMEs named financing as a major

hurdle.<sup>17</sup> One initiative to increase capital is an EFIC-sponsored guarantee for bank loans to SMEs.

Although it ranks highly in the index overall, South Korea comes in only 12th in terms of investment climate. This is largely the result of its poor scores in attractiveness to foreign investors, and subsequently low levels of FDI. The South Korean government encourages FDI, but various sectors of the economy, including telecommunications, remain restricted. All investors, foreign or domestic, struggle with inconsistent regulation, underdeveloped corporate governance and inflexible labour markets, all of which discourage an entrepreneurial environment.<sup>18</sup>

<sup>17</sup> "Australian SMEs keen to invest and grow overseas but held back by access to finance", Export Finance & Insurance Corp, Nov 2013

<sup>18</sup> "2013 Investment Climate Statement - Republic of Korea", US Department of State, Feb 2013

## 2

## Internet environment

MOBILE AND BROADBAND CONNECTIVITY			
1		South Korea	85.3
2		Australia	75.1
3		Germany	73.5
4		US	71.6
5		Japan	69.8
6		UK	63.9
7		France	58.8
8		Canada	58.5
9		Italy	45.2
10		Russia	41.0
11		Saudi Arabia	40.6
12		Brazil	33.6
13		China	32.2
14		South Africa	31.6
15		Argentina	28.9
16		Turkey	28.1
17		Mexico	27.0
18		Indonesia	26.5
19		India	22.6

The Internet environment category measures the affordability and levels of mobile and broadband Internet penetration, B2B and B2C Internet usage and the openness of the telecommunications sector to investment. The number of secure Internet servers per one million people and a measurement of corruption are used

to factor in data security. Finally, innovation in technology is included, represented by the number of ICT patents, research and development (R&D) spending and availability of skilled labour.

Getting more people online can have a ripple effect that boosts usage, skills and technological innovation, all of which can lead to a more competitive e-trade environment. According to the McKinsey Global Institute, from 2004–2009, the Internet contributed up to 21% of GDP growth in the developed world and 3% in the BRIC countries.<sup>19</sup> Most of the benefits of this growth (75%) were captured not by Internet companies themselves but by traditional businesses. The e-Trade Readiness Index also finds that a country's ranking in the Internet environment category is strongly related to its GDP per capita (a correlation of 0.84), indicating that the Internet is contributing to building wealth, a finding that has been confirmed in various other studies.

Looking beyond the macro numbers on penetration, experts point out that more attention must be given to the quality of access and people's capability to avail themselves of the opportunities it affords. "You should see that e-commerce ties in with the degree of Internet use and the quality of broadband connectivity," says Mr Fredriksson. "In Asia, economies like

<sup>19</sup> "Internet matters: The Net's sweeping impact on jobs, growth and prosperity", McKinsey Global Institute, May 2011

South Korea, Japan, Hong Kong and Singapore have invested heavily in ICT, have high broadband penetration rates with high speeds and, as a result more individuals, private companies and governments use the Internet for various kinds of e-commerce.”

South Korea, which ranks at the top of the Internet environment category, exemplifies the link between policy efforts to get people and businesses online in the first instance and then to encourage them to use the Internet. In the aftermath of the Asian financial crisis in 1997 the country embarked on a strategy to harness the benefits of digital technology and it now frequently tops international benchmarks of broadband connectivity, with businesses, consumers and the government all actively engaged online. A recent study by AT Kearney, a global consultancy, classifies South Korea as a “digital DNA” country, meaning that it has a mature online retail environment with advanced infrastructure and a track record of creating innovative ways to shop.<sup>20</sup> While these may focus on the domestic market at the moment, the potential to reach beyond its borders is high.

Australia ranks second in this category based on Internet affordability, data security and availability of skilled labour. In part this is due to the government’s longstanding commitment to provide affordable universal access, including in the most rural areas. Today the government is working to implement the National Broadband Network to provide high-speed service to business and consumers.

BRIC countries lag in this category with Russia in 10th, Brazil 12th, China 13th, and India at the bottom of the list. This is in part due to a lack of fixed-line telecommunications infrastructure in combination with large geographical and population sizes which make the provision of universal services difficult.

## Bridging digital divides

As noted above, affordable access to the Internet is necessary but not sufficient for e-trade readiness because availability does not directly translate into usage—hence the addition of B2B and B2C Internet usage indicators in the Internet environment category. This is particularly relevant as a means of identifying where SMEs may lack the skills to engage in e-commerce.


















It appears as if Argentina, Brazil and Mexico, in particular, are lagging behind in this area. Kati Suominen, founder and chief executive officer of TradeUp Capital Fund and Nextrade Group, explains that although Latin America is relatively well-connected, many people and SMEs in the region are still either not using the Internet at all or not making the most out of it. To improve in this area, greater awareness of the benefits to being online is needed along with further investment in digital literacy. “There is still work of be done to teach people how to utilise the Internet better. We need to teach SMEs how to use the Internet to facilitate and expand trade,” explains Ms Suominen. “How do we teach them to be strategic and proactive?”

For example, on a basic level, online tools such as non-cash payment methods can simplify business operations and improve efficiency by reducing paperwork and allowing easy tracking of payments via online systems. At a higher level, digital tools can contribute to business development and, eventually, revenues. Singapore, although not included in the Index, exemplifies a competitive environment for e-trade where SMEs and large companies vie for the same consumers. “In order to be competitive and win the business, you have to have more relevance than your competitors. You need to differentiate yourself,” says Thien Kwee Eng, assistant managing director at the Economic Development Board. Digital tools for marketing, branding and sales can improve the competitiveness of SMEs.

<sup>20</sup> “The 2013 Global Retail eCommerce Index: Online retail is front and center in the quest for growth”, AT Kearney, 2013

## 3

## International trading environment

INTERNATIONAL TRADING ENVIRONMENT			
1		South Korea	73.3
2		UK	70.8
3		Japan	66.2
4		Germany	65.7
5		US	62.9
6		China	61.7
7		Australia	59.3
8		France	58.7
9		Canada	56.6
10		India	49.9
11		Indonesia	49.8
12		Italy	48.7
13		Mexico	48.2
14		Turkey	46.1
15		Saudi Arabia	44.1
16		Russia	32.3
17		Argentina	31.7
18		Brazil	31.2
19		South Africa	29.6

The international trading environment category captures the extent to which each economy encourages open and affordable trade. It is measured, in part, by customs' efficiency and overall physical infrastructure. Since there are no official, comprehensive statistics on cross-

border e-trade, the Index uses trade statistics on ICT goods as a proxy for this. The amount of ICT imports as a percentage of total goods imports is included as it is indicative of domestic demand for ICT, which is necessary for e-trade. ICT exports as a percentage of total goods exports is included as a proxy for the general domestic ICT industry because governments that promote ICT tend to have higher exports in this category. Lastly, whether a country participates in the WTO's Information Technology Agreement is a proxy for its openness to participation in multilateral trade agreements. A ranking of outsourcing attractiveness and measurement of average cloud computing speeds are factored in to account for the potential of trade in services.

South Korea, which ranks at the top of the trade category, combines high levels of ICT trade with streamlined and inexpensive customs administration. Cloud computing speeds are also high. China, which has become the world's largest overall ICT import/export economy,<sup>21</sup> underperforms (6th) in this category primarily due to its weaknesses in physical infrastructure (16th) and customs efficiency (18th) relative to the rest of the G20. The combination of weak infrastructure and bureaucracy complicates supply chains and deters SMEs from engaging in cross-border trade.

<sup>21</sup> "UNCTAD statistics show China now the world's largest exporter and importer of ICT products", UNCTAD, March 2012

Australia, which tops the overall Index, ranks seventh in this category, hurt by relatively high costs for container imports (8th) and exports (10th). However, this does not take into account simplified customs procedures applied in Australia for packages valued at less than AU\$1,000 (due to lack of comparable data, the Index does not account for customs procedures for small packages) which affect the efficiency of international shipping. Cloud computing speeds are also relatively low (9th).

### New world, old barriers

The efficiency of the international trade environment is especially important for encouraging SMEs to engage in cross-border business. Typically, they do not make exporting a priority. But simple online tools now enable buyers in distant corners of the world to purchase goods from them, a phenomenon that Magnus Rentzhog, senior adviser at the Swedish National Board of Trade, calls the rise of randomised trade. Today it is possible that companies that did not plan to export find that orders come from unexpected—or random—corners of the world. “We are seeing companies that are accidental exporters,” agrees Ms Suominen. But whether SMEs choose to service all potential markets comes down to the ease of doing so. If shipping and customs procedures are costly and cumbersome, they may well avoid certain countries.

While the opportunity for cross-border trade exists, to capitalise on it SMEs must be equipped to compete in the global market. According to Michael Ducker, chief operating officer and

president, international, at FedEx Express, which handles approximately four million packages a day,<sup>22</sup> in today’s world company size is irrelevant—all companies demand the same levels of speed, reliability and global physical delivery networks.

But in this new world, customs officials, regulators and policymakers have not been able to keep up. “Technology advances so rapidly, while the pace of modifying or introducing new legislation is different,” says Brigitte Acoca, a consumer policy analyst and lawyer with the Directorate for Science, Technology and Industry at the OECD. Current trade rules were written for large companies that have spent years developing their international strategy and building out the infrastructure necessary to execute it, explains Mr Ducker. Meanwhile, SMEs tend to ship smaller parcels to different locations and cannot necessarily benefit from cost savings to be had by shipping in bulk. Similarly, the costs of customs compliance can be prohibitively expensive, limiting their reach.




















To improve competitiveness, Ms Suominen recommends increasing the valuation ceiling for goods below which no duty is charged and clearance levels are minimal. Such measures have had a good effect in Latin American countries like Brazil, Peru and Colombia which have simplified customs procedures for packages below certain weight and value limits. In Brazil, which has the most liberal ceilings, the programme has resulted in almost 11,000 new exporters and more than 120,000 shipments since its inception in 1999. In 2012, the value of simplified exports reached US\$272m.<sup>23</sup>

<sup>22</sup> “Q4 Fiscal 2014 Statistics”, FedEx Corp

<sup>23</sup> “Reunión del Grupo Técnico Ejecutivo sobre Integración Comercial por Envíos Postales”, The Initiative for the Integration of the Regional Infrastructure of South America, Sept 2013

## 4

## Regulatory and legal framework

REGULATORY AND LEGAL FRAMEWORK			
1		Germany	82.0
2		UK	79.4
3		Canada	79.0
4		Australia	75.5
5		France	74.3
6		Japan	73.5
7		US	71.7
8		South Korea	68.5
9		Italy	58.0
10		Mexico	56.9
11		India	55.4
12		China	55.2
13		Saudi Arabia	53.5
14		Turkey	52.0
15		South Africa	50.5
16		Argentina	50.4
17		Brazil	48.4
18		Indonesia	48.0
19		Russia	41.8

The regulatory and legal framework category considers the strength of a country's regulatory regime for ICT-enabled trade. It measures the quality and effectiveness of policies balanced against the effect of public sector bureaucracy and government censorship. The latter is captured because government interference in online

information sharing reduces trust in the online environment and increases regulatory risk. Banking sector health and consumer privacy protection laws are also captured in this category.

Country rankings for the regulatory and legal framework generally match levels of overall development, with developed countries characterised by established, trusted and transparent legal frameworks and poorer countries by weaker regulatory mechanisms.

But this is also an area in which opinions can change with the introduction of clear and proven policies around consumer protection and dispute resolution. "Having a clear set of rules is fundamental to enabling international e-commerce," says Ian Ballon, executive director of Stanford University Law School's Center for E-Commerce and a litigator with Greenberg Traurig LLP. Countries must guarantee a minimum legal system with clear rules, consequences and enforcement. However, developing a clear set of rules around e-trade is difficult. "One of the biggest challenges about regulation for e-commerce within and across jurisdictions is that either no framework exists or you have multiple frameworks that may apply and overlap," explains Ms Acoca at the OECD. "Determining which rules may apply to a given e-commerce transaction might thus be a complicated process for governments, businesses and consumers alike."

Striking a balance between regulation and open competition is also important. Mr Ballon warns that overprotective regulation, especially in the context of e-trade, has the risk of closing, rather than opening, trade flows. Once this equilibrium has been established, governments should refrain from interfering. In this context, India (11th) suffers from fragmented governance and policy implementation that affect the quality and effectiveness of the regulatory framework. China (12th), on the other hand, is hurt by a lack of transparency and risk of interference in the rule of law.

Germany—where 10% of online shoppers buy from abroad and 30% of e-commerce companies sell cross-border, according to Paypers, a news service focused on global payments<sup>24</sup>—ranks at the top of this category due to the quality and effectiveness of its legal framework. Its export-driven economy has a long and proven track record that inspires trust.

Russia ranks at the bottom in this category, hurt by political uncertainty, lack of transparency and censorship, which damages trust in the Internet environment. The OECD has trimmed its 2014 growth forecast for Russia from 2.3% to 0.5%, citing increased uncertainties and capital flight as its main concerns, something that affects the perception of the country among vendors doing business internationally.<sup>25</sup>

## Countervailing forces

While the rise of the Internet as a platform for trading brings economic opportunities, it also introduces a host of new products, stakeholders and transactions that require supervision. Undoubtedly, the tension between regulation and commerce is an ongoing dynamic that will continue to affect ICT-enabled trade for some years to come.

One key friction point is likely to be data protection, an emerging issue in which geopolitical tensions may factor into decisions about how and where companies must store and

share information, creating an environment of distrust and protectionism.

A larger issue is how to make consumers feel confident in the online purchase experience. “Trust is a central aspect of e-commerce,” explains Mr Rentzhog. It is important, especially in the international context, to make consumers feel comfortable enough to buy online. Consumer protection and dispute resolution policies help to create trust. However, the issue of trust goes beyond regulation—several recent incidents of data theft have shown that vulnerabilities still exist.

But how to encourage convergence of standards on an international level, and to make consumer rights and obligations transparent, will be a difficult challenge. At the OECD’s International Business Dialogue in 2014 it was suggested that any attempt to harmonise national regulations would quickly get bogged down in politics. Instead, it was suggested that tools such as the Common European Sales Law be considered in place of harmonisation. The summary report from the conference also suggested that: “The process of moving towards convergence should be driven by those who are actually protected by the legislation. A possibility could be, for example, to develop a multi-national consumer rights exchange platform for consumer organisations.”

Overcoming privacy and security challenges will be a key factor in further strengthening the e-trade environment and allowing e-commerce to flourish globally and among large and small companies alike. In May 2014, the OECD Committee on Consumer Policy released guidance on mobile and online payments that aims to boost consumer protection and identify ways that policymakers and businesses can work together to build trust and promote innovation.<sup>26</sup> It recommends the establishment of minimum levels of consumer protection across existing and emerging payment mechanisms, enhanced privacy and child protection and transparent and accessible standards disclosure.

<sup>24</sup> Cross-border Ecommerce Report, Germany: Critical Facts and Insights for International Expansion, The Paypers, 2013




















<sup>25</sup> “OECD Slashes Russian Growth Forecast”, The Moscow Times, May 6th 2014

<sup>26</sup> “Consumer Policy Guidance on Mobile and Online Payments”, OECD Digital Economy Papers, OECD, May 2014

## 5

## E-payments

## E-PAYMENTS AND MARKETING ENVIRONMENT

1		Canada	68.1
2		Australia	67.7
3		UK	63.5
4		US	56.8
5		South Korea	56.1
6		Japan	52.5
7		Mexico	50.9
8		Argentina	49.9
9		China	48.7
10		South Africa	48.3
11		Brazil	45.0
12		Germany	44.1
13		France	43.0
14		Saudi Arabia	42.4
15		Italy	40.2
16		Turkey	34.7
17		Russia	31.1
18		India	26.9
19		Indonesia	23.4

<sup>27</sup> Chris Strohm and Margaret Talev, "Obama Unveiling NSA Changes in Response to Snowden Leaks", Bloomberg, Jan 17, 2014

<sup>28</sup> "E-commerce in Canada: Pursuing the promise", Report of the Standing Committee on Industry, Science and Technology, May 2012

<sup>29</sup> Ben Fung, Miguel Molico and Gerald Stuber, "Electronic Money and Payments: Recent Developments and Issues", Discussion Paper, Bank of Canada, Feb 2014

The e-payments category considers a country's level of readiness for electronic payments (including mobile), a key facilitator of online trade, by measuring the contribution of credit cards to consumption in the past five years, the use of electronic payments and the use of

smartphones to purchase goods or services. Social media penetration and usage, which reflect the potential for digital marketing, are also captured. Finally, there is a qualitative measurement of government monitoring of Internet media, which can reduce the ability to engage consumers online and can damage trust, which will drive away customers. For example, in the US after the revelations made by Edward Snowden, a former government IT contractor, about the extent of government monitoring of Internet activity, the Information and Technology Innovation Foundation estimated that the backlash could ultimately cost companies between US\$22bn-35bn over three years.<sup>27</sup> While these figures are for the entire economy, e-trade is embedded in this.

Canada ranks first in the e-payments category, driven by a high usage of e-payments (2nd) and social media (1st), which enables marketing, and mobile readiness (1st). It is also among the ten countries that are characterised by low government monitoring. Although to date only a small fraction of Canadian SMEs have benefited from using the Internet for online sales,<sup>28</sup> the domestic use of e-payments continues to rise as growth in the volume of e-wallet and electronic person-to-person payments has been almost 40% per year since 2008, according to the Canadian Payments Association.<sup>29</sup> A study by Mastercard, a

financial services company, showed that Canada is leading the world in cashless payments as non-cash payments account for 90% of the total value of domestic consumer payments.<sup>30</sup> Canada ranks 7th overall in the e-Trade Readiness Index as its scores in the Internet environment and international trading environment hurt its overall assessment.

With the exception of the UK (3rd), European countries fare relatively poorly with Germany (12th), France (13th), and Italy (15th) all in the bottom half due to low use of credit cards in the past five years and low social media usage, which reduces the potential for digital marketing.

China ranks tenth—surprising given the role, size and innovation of its largest Internet companies, which are partnering with banks to introduce new fund management services that provide higher returns than those available from traditional banks. These companies are also disrupting the traditional (and under-developed) bank payment systems, and cutting into banks' fees from such services.<sup>31</sup>

## Disruptive technologies

Electronic and mobile payments present an attractive market opportunity. A 2013 study by Capgemini, an IT consultancy, found that the three main forces driving mobile and electronic payments are: smartphone penetration and Internet usage; technology advances; and innovative products and services.<sup>32</sup>

Without doubt a more efficient, cost-effective method for sending and receiving payments would benefit SMEs, and governments that want to promote e-trade should look to the leaders in the e-payments category for potential transferrable products and lessons. In Europe and the Americas, where banks have traditionally been the payment service providers, interconnected payment systems with international reach have been successful, suggesting that openness to these systems is beneficial. Yet Ms Acoca cautions against

prescribing a one-size-fits-all solution in the world of e-payments, where a number of parties (traditional and new payment providers and intermediaries) interact with consumers. In Asia, where buyers may rely less heavily on banks, mobile applications for payments have worked well. In countries with high remittances, alternative payment providers working with banks have thrived. But today these models face challenges around transferability and interoperability.

In Kenya, for instance, a local telecommunications company has created M-PESA, a mobile phone e-payments service that has revolutionised money transfers by allowing anyone with a phone to make purchases which previously may have required a bank account and credit card, luxuries afforded only to a few in developing countries. Today roughly 25% of Kenya's annual GDP flows through M-PESA and the technology is replicated not only in neighbouring Tanzania but also in places like India and Romania.<sup>33</sup> However, the success of M-PESA in Kenya and its transferability to new regions of the world do not yet have a significant impact on e-trade as the systems are not open to transactions outside of the mobile network of users.

The willingness and ability to create products and services tailored to local markets is viewed as critical to ICT-enabled trade. Of the 3bn Internet users expected by year-end 2014, two-thirds will come from Asia-Pacific, the Middle East, Africa and Latin America.<sup>34</sup> Already e-commerce has opened up new opportunities for businesses in these regions, which have traditionally been excluded from global trade due to poor infrastructure. "Today the most rapid growth in trade is occurring in emerging markets," agrees Mr Ducker at FedEx. "In particular, affordable mobile access is allowing countries with less-developed regulatory frameworks to leapfrog more advanced economies in their adoption of certain technologies that enable e-trade."

<sup>30</sup> "The Global Journey from Cash to Cashless", Mastercard, Sept 2013.

<sup>31</sup> "Tech groups transform how finance is done in China", *Financial Times*, Apr 15, 2014

<sup>32</sup> "World Payments Report 2013", Capgemini, RBS

<sup>33</sup> "The World in 2014, ITC Facts and Figures", International Telecommunication Union, Apr 2014

<sup>34</sup> "ITU releases 2014 IT figures", International Telecommunication Union, May 5th, 2014

# Conclusion

In 2020, the Internet population is expected to reach 5bn, up from 2.3bn today.<sup>35</sup> Most of the growth will come from developing countries, where currently there are on average 21 Internet users per 100 inhabitants, compared to 84 in developed countries.<sup>36</sup> This presents an enormous opportunity for cross-border e-trade. But there are numerous challenges as well.

One is complicated customs procedures. While the potential for global e-trade is clear, long processing times and high costs in customs have been identified as barriers to entry, especially for SMEs. Trade rules that were designed for large companies shipping bulk packages should be revised to allow for ICT-enabled small business trade. Programmes like Exporta Facil in Latin America, which streamline customs procedures for small, low value shipments, have already shown an impact. Postal systems could also consider programmes that make international shipping easier and less costly. For example, Singapore Post launched a pre-paid service in 2011 that targets SMEs by offering expedited delivery to major cities in selected countries and online tracking at a discount.

A second challenge will be overcoming potentially burdensome data privacy regulations. If countries that are currently reevaluating data privacy and data transfer laws implement strict

protections such as the requirement to store data in-country, compliance costs could be overwhelming for SMEs (and indeed for all global companies).

For trade more broadly there is a need for cooperation and coherence among policies that protect e-trade participants (buyers and sellers) around the world. Careful attention must be paid to the dynamic between prudent regulation and openness to innovation and trade.

Finally, there is still much work to be done to bridge various digital divides. Internet access is an important step in this process. But so too are measures to ensure citizens have the digital literacy skills to avail of the opportunities that Internet access presents.

The top three countries in the Index—Australia, South Korea and the US—generally score well across the five components of the Index: investment climate, internet environment, international trading environment, regulatory and legal framework and e-payments. All three economies have relatively wealthy middle classes with good broadband access and skilled Internet usage. With respect to trade, these countries have strong infrastructure and efficient customs administration, although it can be difficult for SMEs to benefit due to the smaller scale of

<sup>35</sup> "The World in 2014: ICT Facts and Figures", International Telecommunication Union, 2014 ; Joshua Meltzer, "The Internet, Cross-Border Data Flows and International Trade", Issues in Technology Innovation, Center for Technology Innovation at Brookings, Feb 2013

<sup>36</sup> "The World in 2014: ICT Facts and Figures", International Telecommunication Union, 2014

their operations. Recognising this, there are programmes, which range from financing to simplified customs, to promote SMEs engaging in international trade. Regulatory and legal frameworks are established and clear. Lastly, the environment for e-payments is competitive and usage is high.

In future, those countries that best take advantage of the opportunities for ICT-enabled trade will be those that understand and address the factors encouraging or hindering it.



# Appendix

## Index methodology

### The G20 e-Trade Readiness Index Methodology June 29, 2014

The G20 e-Trade Readiness Index measures the degree to which the G20 countries encourage—through policy, regulation and infrastructure—cross-border trade using the Internet. The report is based on a quantitative Index which scores the countries (excluding the EU as a separate entity) across five categories—investment climate, Internet environment, international trading environment, regulatory and legal framework, and the environment for e-payments.

*Investment climate* measures macroeconomic and political stability as well as demographic factors, such as population, median age and education, that affect the risks and returns associated with investment in a country.

*Internet environment* measures the levels of ICT affordability, penetration, usage, R&D, skilled labour, openness of the telecommunications sector as well as the number of secure Internet servers and corruption to factor in data security.

*International trading environment* captures the extent to which each economy encourages

open and affordable trade. It is measured, in part, by customs efficiency and overall physical infrastructure but also ICT trade statistics.

*Regulatory and legal framework* considers the strength of a country's regulatory regime for ICT-enabled trade. It measures the quality and effectiveness of policies balanced against the effect of public-sector bureaucracy and government censorship.

*Environment for e-payments* considers a country's level of readiness for electronic payments by measuring the contribution of credit cards to consumption, the use of electronic payments and smartphones to purchase goods or services as well as social media penetration and usage.

The Index comprises 44 individual indicators. They fall into three broad categories:

*Quantitative indicators:* Twenty-three of the Index's 44 indicators are based on quantitative data—for example, "Electronic payments usage" as % of the population age 15+.

*Qualitative indicators:* Twenty of the indicators are qualitative assessments of a country's environment for e-Trade, for example "Regulatory and legal framework," which is assessed on a scale of 1-5 where 5=good.

**Status indicator:** One indicator describes whether something is or is not the case: the “WTO Information Technology Agreement signatory,” for which the available answers are Yes or No.

## Data sources

A team of in-house researchers collected data for the Index in May and June 2014. In addition to data from The Economist Intelligence Unit, publicly available information from official sources has been used where applicable. Primary sources include the World Bank, International Telecommunications Union, the World Economic Forum and the United Nations Conference on Trade and Development. A complete list of sources is included in the table of indicators at the end of this appendix.

## Indicator normalisation

In order to be able to compare data points across countries, as well as to construct aggregate scores for each country, the project team had to first make the gathered data comparable. To do so, the quantitative indicators were “normalised” on a scale of 0 to 100 using a min-max calculation, where the score is the standard deviation from the mean, with the best country scoring 100 points and the worst scoring 0.

Qualitative indicators were normalised by rebasing the range so that scores lie between 0 and 100. For example “Regulatory and legal framework” is a rating in the range 0-100. This rating is normalised by dividing by 10.

The status indicator was normalised as a two point rating. For example “WTO Information Technology Agreement signatory” is normalised so that “Yes” scores 100 and “No” scores 0.

## Index construction

The Index is an aggregate score of all of the underlying indicators. The Index is first

aggregated by category—creating a score for each category (for example, investment climate)—and finally, overall, based on the composite of the underlying category scores. To create the category scores, each underlying indicator was aggregated according to an assigned weighting. The category scores were then rebased onto a scale of 0 to 100.

### Sample calculation for INVESTMENT CLIMATE category score for Australia

INDICATOR	Normalised score		Weight		Weighted score
1.1) Political stability	94.4	x	12.5%	=	11.8
1.2) Macroeconomic climate	74.4	x	12.5%	=	9.3
1.3) Middle class income growth	33.3	x	12.5%	=	4.2
1.4) Access to funding for entrepreneurs	81.0	x	12.5%	=	10.1
1.5) Tax regime	70.0	x	12.5%	=	8.8
1.6) FDI attractiveness	14.7	x	12.5%	=	1.8
1.7) Annual foreign investment in telecoms	10.7	x	12.5%	=	1.3
1.8) Education	100.0	x	12.5%	=	12.5
INVESTMENT CLIMATE SCORE					59.8

The overall Index score is calculated in the same way as the category scores—that is, as the weighted sum of the category scores, rebased onto a scale of 0-100. An example is shown below:

### Sample calculation for OVERALL SCORE for Australia

CATEGORY	Normalised score		Weight		Weighted score
Investment climate	59.8	x	20.0%	=	12.0
Internet environment	75.1	x	20.0%	=	15.0
International trading environment	59.3	x	20.0%	=	11.9
Regulatory and legal framework	75.5	x	20.0%	=	15.1
E-payments	67.7	x	20.0%	=	13.5
OVERALL SCORE					67.5

## List of categories, indicators and their weightings in the Index

Indicator	Unit	Source	Weight
<b>1) INVESTMENT CLIMATE</b>	Rating 0-100, 100=best	Equally weighted sum of indicator scores in this section	20%
1.1) Political stability	1-10, 10 =high	EIU Country Data	
1.2) Macroeconomic climate	1-10, 10 =high	EIU Country Data	
1.3) Middle class income growth	0-6, 6=high	CIA World Factbook/EIU calculation	
1.4) Access to funding for entrepreneurs	1-8, 8=high	Ernst & Young	
1.5) Tax regime	1-10, 10=good	EIU Country Data	
1.6) FDI attractiveness	US\$ bn	EIU Country Data	
1.7) Annual foreign investment in telecoms	US\$ m	International Telecommunications Union	
1.8) Education	% gross tertiary enrollment	UNESCO	
Indicator	Unit	Source	Weight
<b>2) INTERNET ENVIRONMENT</b>	Rating 0-100, 100=best	Equally weighted sum of indicator scores in this section	20%
2.1) Mobile cellular tariffs	Per minute cost PPP\$	World Economic Forum	
2.2) Internet users	users per 100	EIU Country Data	
2.3) Mobile subscribers	users per 100	EIU Country Data	
2.4) Secure Internet servers	per 1m people	World Bank	
2.5) Corruption	1-5, 1=high	EIU Country Data	
2.6) Telecoms regulatory & policy environment	1-7, 7=well developed	World Economic Forum	
2.7) Skilled labour availability	1-5, 5=high	EIU Country Data	
2.8) ICT patents	per 1m people	WIPO	
2.9) R&D	% of GDP	World Bank	
2.10) Network infrastructure and local content	0-4, 4=highest	Connectivity scorecard	
Indicator	Unit	Source	Weight
<b>3) INTERNATIONAL TRADING ENVIRONMENT</b>	Rating 0-100, 100=best	Equally weighted sum of indicator scores in this section	20%
3.1) ICT goods imports	% of total goods imports	UNCTAD	
3.2) ICT goods exports	% of total good exports	UNCTAD	
3.3) ICT services exports	% of total services exports	UNCTAD	
3.4) Customs import time	days	World Bank	
3.5) Customs export time	days	World Bank	
3.6) Customs import cost	(US\$ per container)	World Bank	
3.7) Customs export cost	(US\$ per container)	World Bank	
3.8) WTO Information Technology Agreement signatory	0/1, 1=signed	WTO	
3.9) Infrastructure	1-10, 10 = good	EIU Country Forecasts	
3.10) Cloud computing speed	kbps	CISCO Cloud Readiness/EIU calculation	
3.11) International bandwidth	bps	International Telecommunications Union	
3.12) Outsourcing attractiveness	1-10, 1=attractive	Sourcing Line/EIU calculation	

## List of categories, indicators and their weightings in the Index (continued)

Indicator	Unit	Source	Weight
<b>4) REGULATORY AND LEGAL FRAMEWORK</b>	Rating 0-100, 100=best	Equally weighted sum of indicator scores in this section	20%
4.1) Quality of bureaucracy and policy making	1-5, 5=high	EIU Country Data	
4.2) Effectiveness of the legal framework	1-10, 10=high	EIU Country Data	
4.3) Government censorship	1-100, 100=worst	Reporters without Borders	
4.4) Regulatory burdens, government bureaucracy	1-7, 1=extremely burdensome	EIU Country Data	
4.5) Global banking regulations	0-4, 4=least healthy	Basel Committee on Banking Supervision/EIU Calculation	
4.6) Consumer privacy protection laws	0-11, 11=strong protection	EIU estimate	
4.7) Regulatory and legal framework	1-5, 5=good	EIU Country Data	
<b>Indicator</b>	<b>Unit</b>	<b>Source</b>	<b>Weight</b>
<b>5) E-PAYMENTS</b>	Rating 0-100, 100=best	Equally weighted sum of indicator scores in this section	20%
5.1) Consumption using credit cards	%, average 2008 - 2012	Moody's	
5.2) Electronic payments usage	% age 15+	World Bank	
5.3) Mobile payments readiness	1-100, 100=most ready	MasterCard	
5.4) Mobile e-commerce	% smartphone owners who have purchased via phone	Google	
5.5) Social media usage	% users	WeAreSocial.sg	
5.6) Internet interaction and marketing	hours per day on social media	WeAreSocial.sg	
5.7) Social media monitoring - government requests on users	0-2, 2=high monitoring	Google/EIU Calculation	

While every effort has been taken to verify the accuracy of this information, The Economist Intelligence Unit Ltd. cannot accept any responsibility or liability for reliance by any person on this report or any of the information, opinions or conclusions set out in this report.

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