A global index and benchmarking study by the Economist Intelligence Unit **Findings and methodology** 







# **Preface**

The 2011 Government E-Payments Adoption Ranking (GEAR) is an Economist Intelligence Unit (EIU) qlobal index and benchmarking study commissioned by Visa. This is the second edition of the study, which was initially published in October 2007. This report discusses the key findings of the index and the accompanying model. The research for this project was conducted during the summer and autumn of 2011 by a team of country analysts. The findings, interpretation and conclusions expressed herein are those of the author(s) and do not necessarily reflect the views of Visa.

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# **Executive summary**

In a relatively short time, advances in technology and business models based on electronic platforms have enabled many governments to increase the efficiency and scope of their e-payment infrastructure. Submitting a tax return online, swiping an electronic card to pay for a bus journey or even, perhaps, receiving government health and/or social benefits directly in a bank account are now a way of life in many countries. The ability of governments to offer these services via electronic platforms benefits all parties in the form of reduced costs and increased access. Indeed, an effective, inclusive e-payments system has become the core of what is being termed the "transformational approach" to government. Effective and efficient systems are dependent on not only a strong technological infrastructure but also strong connectivity between government, citizens and businesses.

To understand the growth and evolution of government e-payments adoption, and to understand where countries stand in relation to one another, the Economist Intelligence Unit (EIU) created the Government E-Payments Adoption Ranking (GEAR) in 2007. The objective of the study is to measure the extent to which countries provide key government payment services on electronic platforms and the underlying factors that affect government e-payments adoption. The 2011 GEAR study represents an expansion of this inquiry to rank 62 countries across seven categories and 37 indicators (see *Category and indicator framework* on pages 14 and 15).

The top-line results of the 2011 GEAR study are summarised as follows:

- The top three performers—the US, the UK and Norway—offer a comprehensive e-payments landscape, strong policies and developed infrastructure. Led in 2011 by the US (first), the UK (second) and Norway (third), the top-ranked countries demonstrate a high degree of connectivity and score well in all areas, from the availability of e-payments for businesses and citizens to the quality of infrastructure and social and economic drivers of e-payment uptake.
- The bottom three—Nigeria, Uganda and Ukraine—perform poorly in most of the categories.
  While each country has specific challenges, under-performance at this end of the spectrum serves to highlight the negative impact of inaction in e-payments adoption.
- Top performers typically have high GDP per capita. The study reveals a moderately strong correlation between high GDP per capita and overall score. This implies that an improvement in a country's government e-payments adoption score will likely correlate with an increase in GDP per capita.



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- There has been a marked improvement in technological infrastructure since 2007. Government e-payments adoption stands to benefit from this given that connectivity—through a variety of devices—is the primary enabler of such payments. Recognising that investment in technological infrastructure can support economic growth, many developing countries are investing in Internet infrastructure, including installing technologies that allow individuals to access the Internet through mobile devices. The EIU expects to see the biggest gains in infrastructure development in emerging markets over the next few years.
- Overall, the countries in the study performed well in the following areas:
  - ✓ Income tax payments
  - ✓ Social security contributions
  - ✓ Automotive payments
  - ✓ Value-added/sales tax payments
  - ✓ Mobile-phone subscriptions per 100 people
  - ✓ Broadband penetration
  - ✓ Number of automated teller machines (ATMs) per 10,000 people
- Overall areas where most countries need improvement are:
  - ✓ Obtaining/paying for an ID card
  - ✓ Requesting unemployment, workers' compensation and welfare benefits
  - ✓ Disbursement of loans
  - ✓ Integrating the informal economy
- By region, the strongest performers are in the Americas, Western Europe and Asia. Within the top 20 countries, the US is ranked first, Canada is ranked 16th and 10 are West European countries. South Korea and Singapore lead the four top-twenty Asian countries.
- The scope and depth of government payment services is closely related to the existence of enabling policies and a developed infrastructure. As demonstrated in the previous study, we see again in 2011 that the range and quality of government payment services is closely related to a country's technological infrastructure, enabling policies and strength of social and economic factors.

By examining some 37 indicators in seven broad areas, the study explores the e-payments landscape in each country. The results of this study will be presented in more detail in the following pages as we report on the findings for each of the seven categories and explain the project methodology in more detail.



# Introduction and study context

Many governments have improved the efficiency and reach of their e-payment infrastructure in recent years, yet, a key challenge has been to maintain the momentum of change in the face of fiscal constraints. Some onlookers feared that the roll-out of the infrastructure that supports e-payment systems, as well as government spending initiatives, would slow sharply in light of the global financial crisis, tight public finances and continued economic uncertainty. Despite recent challenges, the benefits derived from improving government e-payment services have helped to spur their continued growth. Governments can point to efficiency gains, financial inclusion and increased transparency as reasons to push ahead, despite budget constraints. Austerity measures in some countries may make operational efficiencies and cost savings even more important for governments.

As e-payments continue to take off in the public and private sectors, government commitment to the uptake of e-payment systems will continue to be crucial. The 2011 GEAR study highlights the need for a comprehensive approach by governments to improve service provision, infrastructure, social and economic context indicators and policies.

Financial inclusion—the provision of financial services at affordable costs to society—also offers the opportunity to bring greater numbers of citizens and businesses into the fold—a laudable effort that pays dividends in terms of poverty reduction. It also facilitates access to government services. Yet without access to a bank account, many people have to rely on alternative payment methods such as cash and cheques to receive government benefits or a business loan. Governments are also adopting innovative solutions to e-payments, including mobile payments systems, which may increase access to services by the unbanked.

In many developing countries the implementation of effective and comprehensive e-payment systems is seen as essential for the transition to a market-based economy. Improvements in accounting and transaction audit procedures will help governments track taxes owed and potentially increase tax revenue. Moreover, the transparency implicit in the introduction and use of government e-payment services is a tool for combating corruption. In particular, bringing transactions onto an electronic platform makes it easier to keep better track of cashflows and to increase accountability. Emerging markets are looking to close the gap with developed countries in terms of providing e-payment services. The results so far have been mixed, with some countries having more success with e-payments adoption than others.



## Measuring e-payments adoption by governments

For the purposes of this research, e-payment is defined as the exchange or transfer of funds over an electronic platform. Examples of electronic platforms include the Internet (accessed via multiple devices, including personal computers, mobile phones and tablets) and mobile-phone networks. Payments through these electronic platforms can be made by various means, including payment card, direct deposit, direct debit, electronic funds transfer and wire transfer.

#### Key changes for the 2011 study

The primary objective of the study is to measure government payment services provision on electronic platforms and to assess each country's infrastructure and enabling environment. The initial study assessed 43 countries<sup>1</sup> across 31 indicators, 16 of which were actual transactions between citizens, businesses and their government. The 2011 GEAR study now ranks 62 countries across 37 indicators (see *Geographic scope* and *Category and indicator framework* sections on pages 14 and 15 for more information).

In the 2011 GEAR study, EIU analysts and contributors conducted online research to test 17 common transactions, including tax payments and refunds, automotive costs, social welfare benefits, business registration and government procurement. They also gathered information on these countries' payment infrastructure and their social, economic and policy context. The results of this research will be discussed in greater detail in subsequent sections of the report.

Since the initial study in 2007, the generally higher levels of Internet connectivity between governments, citizens and businesses, as well as the indispensable role that electronic services now play in most of the world's economies, have changed the status quo for government e-payments adoption. For this reason, the 2011 study introduces some changes to the indicators that form the research framework. To summarise:

- The modifications for 2011 were made to reflect changes in the ways that citizens, governments and businesses access the Internet, as well as the necessity for governments to have in place the regulatory foundation to secure electronic payments.
- Some indicators were adjusted to reflect technological advances. For example, with greater
  connectivity worldwide, the EIU now evaluates broadband penetration instead of Internet penetration
  (including dial-up). We also consider the provision of government services via mobile and contactless
  payments, which have experienced widespread growth in recent years. The 2011 study also looks at
  e-payments for public transit.

<sup>1.</sup> Hong Kong is a Special Administrative Region of the People's Republic of China. For the purposes of this report, Hong Kong is referred to as a country.



# **Key findings**

The 2011 GEAR study reveals a number of noteworthy findings and trends:

- The top three performers offer a comprehensive e-payment landscape, strong policies and developed infrastructure. Led in 2011 by the US (first), the UK (second) and Norway (third), the top-ranked countries demonstrate a high degree of connectivity and score well in all areas, from the availability of e-payments for businesses and citizens to the quality of infrastructure and social and economic drivers of e-payment uptake. Progress towards e-payments adoption requires concerted action in offering the services and having the policies and infrastructure to support them.
- The lower-ranked countries have narrowed the divide in terms of e-payments adoption. The 2011 GEAR study shows that the difference in the overall scores between the top-ranked and bottom-ranked countries (on a 0-100 scale) has narrowed from 79.6 points in 2007 to 69.6 points in 2011, demonstrating that even those countries that need to catch up the most are making progress.
- Top performers typically have high GDP per capita, but there are some notable exceptions. High GDP per capita correlates positively with a relatively strong ranking in this study. The positive correlation between GDP per capita and overall score is 0.64. However, there are some interesting exceptions: Czech Republic, South Korea and Taiwan are all high achievers, but have below average GDP per capita. The opposite is true for many Middle Eastern countries, which rank far below where their relative wealth might suggest.
- Governments vary in the diversity and range of tools used to provide e-payment services. Financial and technological infrastructure, as well as geography and demographics, influence the types of e-payment services offered by governments. Some countries with poor technological and financial services infrastructure are adopting mobile technology to meet e-payment objectives, while those countries with more developed infrastructure are using a wider range of solutions. The 2011 GEAR study demonstrates that governments have many tools with which to improve the provision and quality of e-payment services for both citizens and businesses.
- There has been a marked global improvement in technological infrastructure since 2007<sup>2</sup>. More than half of the countries in the 2011 GEAR study have developed 3G and other mobile-phone technologies, including 4G<sup>3</sup>. The number of mobile-phone subscriptions has soared since 2007, and the diffusion of broadband has grown swiftly. Government e-payments adoption stands to benefit since connectivity—through a variety of devices—is the primary enabler of such payments. Recognising that investment in technological infrastructure can support economic growth, many developing countries are investing in Internet infrastructure, including installing technologies that allow individuals to access the Internet through mobile devices. The EIU expects to see the biggest gains in infrastructure in emerging markets in the coming years.
- 2. The 2007 and 2011 GEAR studies differ in a number of important ways. First, the number of countries covered by the research increased from 43 in 2007 to 62 in 2011. Second, the indicators used to evaluate countries increased. and some indicators that were retained were modified. Finally, the standards used to evaluate countries in 2011 were higher than in 2007. In order to make an accurate comparison between each study, the EIU analysed only the changes witnessed in the original countries researched in the 2007 study, and for an identical set of
- 3. Third generation (3G) mobile technology allows users to access the Internet, video calls and mobile TV, among other applications. Fourth generation (4G) is a successor to the 3G cellular standards, enabling significantly faster connectivity speeds.



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- E-services for tax collection are progressing more rapidly than those for tax refunds. Over the past four years there has been greater adoption of electronic payments for the collection of income tax and value-added/sales tax than for tax refunds. There is evidence, though, that improvements in electronic tax refund systems will follow.
- Integrating the informal economy remains a key challenge facing governments. Integrating the informal economy is considered by many to be a side effect of e-payments adoption. The idea is that well-organised, extensive e-payment systems offer significant benefits and incentives to operate within the formal economy. Such systems also curb the shadow economy by reducing unreported or under-reported sales and cash-based transactions. Many governments espouse commitment to integrating the informal economy, but most struggle with policy execution (assuming there is a policy in place).
- Regulations and policies surrounding e-payments are strengthening. Most countries have legislation and regulations that govern electronic transactions, although far fewer have the means to enforce them. For years the biggest constraint on e-payments adoption (beyond the lack of services offered in many countries) was a lack of trust, as citizens and businesses worried that their credit card or bank account details would be abused. This challenge is slowly being overcome by the roll-out of new and improved e-payment security systems and government enforcement mechanisms. More than one-third of the 62 countries in the 2011 GEAR study receive the highest possible score for their efforts in this area.

Comparisons between the 2007 and 2011 GEAR studies must be approached with care owing to the revised methodology<sup>4</sup>. Nevertheless, a few notable comparisons can be made:

- E-payments for services such as paying automotive fines, tolls and parking costs have increased in the past four years.
- It is still relatively uncommon to be able to obtain or renew a driving licence and/or an ID card online, and where systems are in place there are typically several drawbacks.
- Similar to the situation observed in 2007, few countries have systems in place to facilitate online requests for unemployment, workers' compensation and welfare benefits. While many governments currently disburse benefits via cash or cheques, there is a noticeable movement toward automating these processes.

The overall rankings for the study and the rankings within the categories that comprise the overall score are presented in the following pages.

<sup>4.</sup> The 2007 and 2011 GEAR studies differ in a number of important ways. First, the number of countries covered by the research increased from 43 in 2007 to 62 in 2011. Second, the indicators used to evaluate countries increased, and some indicators that were retained were modified. Finally, the standards used to evaluate countries in 2011 were higher than in 2007. In order to make an accurate comparison between each study, the EIU analysed only the changes witnessed in the original countries researched in the 2007 study, and for an identical set of indicators.



# 2011 GEAR rankings

The overall rankings and scores for the 62 countries in the study and the results for each of the seven categories that contribute to each country's overall rank and score are presented in the following tables. The overall score is a weighted sum of category scores (on a 0-100 scale where 100=most favourable).

#### Overall country performance

Rank	Country	Score
1	United States	93.6
2	United Kingdom	91.6
3	Norway	91.0
4	Germany	89.3
5	South Korea	88.6
6	Australia	88.5
7	Singapore	88.3
8	Austria	88.2
9	Denmark	87.6
10	Sweden	86.4
11	France	86.0
12	Netherlands	85.0
13	Taiwan	84.4
14	Czech Republic	82.8
15	Hong Kong	82.7
16	Canada	82.5
17	Ireland	81.3
18	Israel	80.5
19	Finland	80.1
20	Hungary	79.1
21	Japan	78.5

Rank	Country	Score
22	Spain	78.1
23	Italy	78.0
24	Turkey	74.6
25	New Zealand	73.5
26	Chile	72.2
27	Mexico	72.1
28	Brazil	71.7
29	Malaysia	69.3
30	Philippines	64.2
31	Ecuador	62.1
32	Poland	60.6
33	Argentina	59.6
34	Peru	57.7
35	South Africa	57.4
36	India	56.1
37	China	55.3
38	Dominican Republic	54.7
39	United Arab Emirates	53.4
40	Russia	50.1
41	Colombia	48.7
42	Vietnam	48.5

Rank	Country	Score
43	Thailand	47.6
44	Tunisia	47.1
45	Costa Rica	47.0
46	Bahrain	46.2
=47	Indonesia	45.7
=47	Pakistan	45.7
49	Kazakhstan	44.7
50	Qatar	44.0
51	Saudi Arabia	43.1
52	Morocco	40.2
53	Venezuela	38.7
54	0man	35.2
55	Kuwait	33.4
56	Egypt	32.2
57	Rwanda	32.0
58	Kenya	30.3
59	Iran	29.7
60	Ukraine	28.6
61	Uganda	26.8
62	Nigeria	24.0
'-' indica	tes a tie in rank Source: 2011	GEAR Research



### Rankings by category

#### Citizen-to-Government

Ranks and scores

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	Hong Kong	100	=19	Malaysia	75.0	=41	Kuwait	50.0
=2	Denmark	95.0	=19	Spain	75.0	=41	Poland	50.0
=2	Israel	95.0	=24	Austria	70.0	=41	Russia	50.0
=2	United States	95.0	=24	Netherlands	70.0	=41	South Africa	50.0
=5	Germany	90.0	=24	New Zealand	70.0	=47	Pakistan	45.0
=5	Mexico	90.0	=24	Philippines	70.0	=47	Thailand	45.0
=5	Norway	90.0	=28	Brazil	65.0	=47	Vietnam	45.0
=5	Singapore	90.0	=28	Ecuador	65.0	=50	China	40.0
=5	South Korea	90.0	=28	Finland	65.0	=50	Indonesia	40.0
=5	Sweden	90.0	=28	United Arab Emirates	65.0	=50	Uganda	40.0
=5	United Kingdom	90.0	=32	Chile	60.0	=50	Venezuela	40.0
=12	Canada	80.0	=32	Kazakhstan	60.0	=54	Bahrain	35.0
=12	France	80.0	=32	Qatar	60.0	=54	Kenya	35.0
=12	Hungary	80.0	=32	Saudi Arabia	60.0	=54	Morocco	35.0
=12	Italy	80.0	=36	Argentina	55.0	=54	Nigeria	35.0
=12	Japan	80.0	=36	Colombia	55.0	=54	0man	35.0
=12	Taiwan	80.0	=36	Costa Rica	55.0	=54	Rwanda	35.0
=12	Turkey	80.0	=36	Dominican Republic	55.0	=60	Iran	30.0
=19	Australia	75.0	=36	Peru	55.0	=60	Tunisia	30.0
=19	Czech Republic	75.0	=41	Egypt	50.0	62	Ukraine	15.0
=19	Ireland	75.0	=41	India	50.0	′=′ indica	tes a tie in rank S	ource: 2011 GEAR Research.

#### Government-to-Citizen

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
=1	Ecuador	100	=18	Spain	81.3	=40	Kenya	43.8
=1	Norway	100	=18	Taiwan	81.3	=40	Philippines	43.8
=1	Singapore	100	=24	Finland	75.0	=40	Rwanda	43.8
=1	South Korea	100	=24	Hungary	75.0	=40	Vietnam	43.8
=1	Sweden	100	=24	New Zealand	75.0	=47	Argentina	37.5
=6	Australia	93.8	=27	Japan	68.8	=47	Dominican Republic	37.5
=6	Austria	93.8	=27	Morocco	68.8	=47	Peru	37.5
=6	Brazil	93.8	29	India	62.5	=47	Russia	37.5
=6	Czech Republic	93.8	=30	Bahrain	56.3	=47	United Arab Emirates	37.5
=6	Denmark	93.8	=30	Ireland	56.3	=52	Colombia	31.3
=6	France	93.8	=30	Malaysia	56.3	=52	Saudi Arabia	31.3
=6	Germany	93.8	=30	Poland	56.3	=54	Egypt	25.0
=6	Netherlands	93.8	=30	Tunisia	56.3	=54	Nigeria	25.0
=14	Hong Kong	87.5	=35	China	50.0	=54	Uganda	25.0
=14	Turkey	87.5	=35	Mexico	50.0	57	Qatar	12.5
=14	United Kingdom	87.5	=35	Pakistan	50.0	=58	Iran	0
=14	United States	87.5	=35	South Africa	50.0	=58	Kuwait	0
=18	Canada	81.3	=35	Thailand	50.0	=58	0man	0
=18	Chile	81.3	=40	Costa Rica	43.8	=58	Ukraine	0
=18	Israel	81.3	=40	Indonesia	43.8	=58	Venezuela	0
=18	Italy	81.3	=40	Kazakhstan	43.8	'=' indica	tes a tie in rank Source: 2011 GE/	AR Research.



#### **Business-to-Government**

Ranks and scores

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
=1	Australia	100	=14	Italy	93.8	=43	India	62.5
=1	Austria	100	=14	Mexico	93.8	=43	Poland	62.5
=1	Canada	100	=14	New Zealand	93.8	=45	Costa Rica	56.3
=1	Dominican Republic	100	=14	Turkey	93.8	=45	Kazakhstan	56.3
=1	Germany	100	=26	Argentina	87.5	=45	Thailand	56.3
=1	Israel	100	=26	Ireland	87.5	=45	Vietnam	56.3
=1	Norway	100	=26	Netherlands	87.5	=49	Russia	50.0
=1	Peru	100	=26	South Africa	87.5	=49	United Arab Emirates	50.0
=1	Philippines	100	=26	Spain	87.5	=51	Egypt	43.8
=1	Singapore	100	=31	Sweden	81.3	=51	Morocco	43.8
=1	Taiwan	100	=31	Venezuela	81.3	=53	Bahrain	37.5
=1	United Kingdom	100	=33	Brazil	75.0	=53	Indonesia	37.5
=1	United States	100	=33	Malaysia	75.0	=53	Kenya	37.5
=14	Chile	93.8	=33	Pakistan	75.0	=56	Iran	31.3
=14	Czech Republic	93.8	=33	South Korea	75.0	=56	Ukraine	31.3
=14	Denmark	93.8	=33	Tunisia	75.0	=58	Kuwait	25.0
=14	Ecuador	93.8	=38	China	68.8	=58	Qatar	25.0
=14	Finland	93.8	=38	Colombia	68.8	=60	Nigeria	18.8
=14	France	93.8	=38	Japan	68.8	=60	Saudi Arabia	18.8
=14	Hong Kong	93.8	=38	Rwanda	68.8	62	Oman	0
=14	Hungary	93.8	=38	Uganda	68.8	'=' indica	tes a tie in rank Source: 2011 GE	AR Research.

#### **Government-to-Business**

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
=1	Ireland	100	=21	Hungary	81.3	=41	Thailand	37.5
=1	Netherlands	100	=21	Peru	81.3	=44	Costa Rica	31.3
=1	Norway	100	=21	Spain	81.3	=44	Indonesia	31.3
=1	South Korea	100	=21	Sweden	81.3	=44	Qatar	31.3
=1	United States	100	=26	Canada	75.0	=47	Colombia	25.0
=6	Chile	93.8	=26	Israel	75.0	=47	Morocco	25.0
=6	Czech Republic	93.8	=26	Philippines	75.0	=47	Saudi Arabia	25.0
=6	Germany	93.8	=26	Poland	75.0	=47	Tunisia	25.0
=6	Taiwan	93.8	=30	Ecuador	62.5	=47	United Arab Emirates	25.0
=6	Turkey	93.8	=30	India	62.5	=52	Iran	18.8
=6	United Kingdom	93.8	=30	Malaysia	62.5	=52	Kenya	18.8
=12	Australia	87.5	=33	China	56.3	=52	0man	18.8
=12	Austria	87.5	=33	Dominican Republic	56.3	=52	Ukraine	18.8
=12	Denmark	87.5	=33	Pakistan	56.3	=56	Bahrain	12.5
=12	Finland	87.5	=33	Russia	56.3	=56	Egypt	12.5
=12	France	87.5	=37	Hong Kong	50.0	=56	Kuwait	12.5
=12	Italy	87.5	=37	South Africa	50.0	=56	Nigeria	12.5
=12	Japan	87.5	=39	Argentina	43.8	=60	Rwanda	0
=12	Mexico	87.5	=39	Vietnam	43.8	=60	Uganda	0
=12	Singapore	87.5	=41	Kazakhstan	37.5	=60	Venezuela	0
=21	Brazil	81.3	=41	New Zealand	37.5	'=' indica	tes a tie in rank Source: 2011 GEA	AR Research.



#### Infrastructure

Ranks and scores

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	South Korea	82.7	=22	Czech Republic	62.8	43	Kuwait	36.8
2	Australia	81.6	=22	Spain	62.8	44	Costa Rica	35.9
3	Austria	80.4	24	Israel	62.3	45	Venezuela	35.4
4	United Kingdom	76.8	25	Denmark	61.8	46	Chile	35.0
5	United States	76.6	26	New Zealand	58.3	47	India	34.6
6	Sweden	75.7	27	Argentina	57.9	48	Morocco	33.1
7	Ireland	74.1	28	Turkey	49.9	49	Peru	32.2
8	Canada	73.3	29	Qatar	49.7	50	Dominican Republic	32.1
9	Hong Kong	73.0	30	Poland	48.9	=51	Colombia	31.2
10	France	72.2	31	Mexico	47.8	=51	Ukraine	31.2
11	Norway	70.9	32	Brazil	46.5	53	Ecuador	28.2
12	Japan	70.6	33	Russia	45.4	54	Iran	26.2
13	Taiwan	68.7	34	0man	44.6	55	Egypt	23.7
14	Singapore	68.5	35	Bahrain	44.0	56	Kazakhstan	22.3
15	Italy	68.0	36	Saudi Arabia	42.6	57	Tunisia	22.0
16	United Arab Emirates	65.9	37	Indonesia	39.6	=58	Kenya	21.6
17	Finland	65.1	38	China	39.3	=58	Pakistan	21.6
18	Germany	64.5	39	Thailand	39.1	60	Uganda	19.2
19	Hungary	64.3	40	Vietnam	38.4	61	Nigeria	18.4
20	Malaysia	63.2	41	South Africa	37.4	62	Rwanda	13.6
21	Netherlands	62.9	42	Philippines	37.0	'=' indica	tes a tie in rank Source: 2011 G	EAR Research.

#### $Social \, and \, economic \, context$

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	New Zealand	96.8	22	Malaysia	69.7	=43	China	49.3
2	United States	96.0	23	Czech Republic	68.9	=43	Saudi Arabia	49.3
3	United Kingdom	93.5	24	Argentina	68.8	45	Costa Rica	48.6
4	Canada	93.1	25	Italy	68.7	46	Thailand	47.3
5	Taiwan	91.9	26	Hungary	67.6	47	Qatar	46.4
6	Germany	91.7	27	Chile	66.7	48	Tunisia	46.2
7	Australia	90.0	28	Brazil	65.2	49	Indonesia	44.3
8	Denmark	89.9	29	Poland	64.9	50	Dominican Republic	43.5
9	Netherlands	89.1	30	United Arab Emirates	64.1	51	Philippines	40.5
10	South Korea	88.9	31	Iran	60.3	52	Peru	39.6
11	Austria	85.4	32	Kuwait	59.6	53	Vietnam	37.2
12	Sweden	85.0	33	0man	56.5	54	India	36.9
13	Ireland	84.9	34	Venezuela	55.6	55	Ecuador	35.3
14	Norway	84.2	35	Bahrain	54.9	56	Morocco	25.9
15	France	83.1	36	Colombia	54.7	57	Kenya	22.3
16	Hong Kong	82.7	37	Ukraine	54.3	58	Rwanda	21.2
17	Finland	82.6	38	Russia	53.5	59	Uganda	18.3
18	Japan	82.0	39	South Africa	52.1	60	Nigeria	16.9
19	Singapore	80.5	40	Mexico	52.0	61	Pakistan	14.1
20	Spain	75.5	41	Kazakhstan	51.3	62	Egypt	12.2
21	Israel	75.1	42	Turkey	50.7	′=′ indica	tes a tie in rank Source: 2011 GE	AR Research.



A global index and benchmarking study

# **Policy context** Ranks and scores

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
=1	Austria	100	=19	Indonesia	83.3	=40	Turkey	66.7
=1	United Kingdom	100	=19	Malaysia	83.3	=40	United Arab Emirates	66.7
=1	United States	100	=19	Mexico	83.3	=45	Costa Rica	58.3
=4	Australia	91.7	=19	New Zealand	83.3	=45	Dominican Republic	58.3
=4	Czech Republic	91.7	=19	Philippines	83.3	=45	Egypt	58.3
=4	Denmark	91.7	=19	Qatar	83.3	=45	Pakistan	58.3
=4	Finland	91.7	=19	South Korea	83.3	=45	Peru	58.3
=4	France	91.7	=19	Spain	83.3	=45	Russia	58.3
=4	Germany	91.7	=30	Brazil	75.0	=45	Thailand	58.3
=4	Hong Kong	91.7	=30	Canada	75.0	=45	Venezuela	58.3
=4	Hungary	91.7	=30	Chile	75.0	=53	Ecuador	50.0
=4	Ireland	91.7	=30	Colombia	75.0	=53	Kuwait	50.0
=4	Japan	91.7	=30	Israel	75.0	=53	Morocco	50.0
=4	Netherlands	91.7	=30	Saudi Arabia	75.0	=53	Ukraine	50.0
=4	Norway	91.7	=30	South Africa	75.0	=57	Iran	41.7
=4	0man	91.7	=30	Taiwan	75.0	=57	Kazakhstan	41.7
=4	Singapore	91.7	=30	Tunisia	75.0	=57	Nigeria	41.7
=4	Sweden	91.7	=30	Vietnam	75.0	=57	Rwanda	41.7
=19	Bahrain	83.3	=40	Argentina	66.7	61	Kenya	33.3
=19	China	83.3	=40	Italy	66.7	62	Uganda	16.7
=19	India	83.3	=40	Poland	66.7	′=′ indica	tes a tie in rank Source: 2011 GEA	R Research.



A global index and benchmarking study  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left$ 

## **Geographic scope**

The 62 countries that are included in the 2011 GEAR study represent six continents, and vary in terms of economic development and political systems. These countries together represent approximately 81% of total world population and an estimated 94% of total world GDP<sup>5</sup>. The list of countries is included below, with those that are new to the study in 2011 delineated in blue.

Total consider

#### **Countries**

Argentina
Australia
Austria
Bahrain
Brazil
Canada
Chile
China
Colombia
Costa Rica
Czech Republic
Denmark
Dominican Republic
Ecuador
Egypt
Finland
France
Germany
Hong Kong
Hungary
India

Indonesia
Iran
Ireland
Israel
Italy
Japan
Kazakhstan
Kenya
Kuwait
Malaysia
Mexico
Morocco
Netherlands
New Zealand
Nigeria
Norway
<b>O</b> man
Pakistan
Peru
Philippines
Poland

Qatar Russia Rwanda Saudi Arabia Singapore South Africa South Korea Spain Sweden Taiwan Thailand
Rwanda Saudi Arabia Singapore South Africa South Korea Spain Sweden Taiwan
Saudi Arabia Singapore South Africa South Korea Spain Sweden Taiwan
Singapore South Africa South Korea Spain Sweden Taiwan
South Africa South Korea Spain Sweden Taiwan
South Korea Spain Sweden Taiwan
Spain Sweden Taiwan
Sweden Taiwan
Taiwan
Thailand
Illaliallu
Tunisia
Turkey
Uganda
Ukraine
United Arab Emirates
United Kingdom
United States
Venezuela
Vietnam

# Category and indicator framework

The 37 indicators and seven categories researched in this study improve upon the approach of the 2007 GEAR study, which analysed 31 indicators across six categories. For the most part the EIU utilised indicators from the 2007 study so that cross-time comparisons could be made. Seven new indicators were added to the 2011 GEAR study and one indicator (from the 2007 GEAR study) was removed. These modifications reflect the changing landscape for government e-payments overall and the desire to incorporate a wider range of analysis into the research. The research includes a mix of both qualitative and quantitative indicators.

The categories and indicators included in the 2011 GEAR study are listed in the table on the following page. The scoring criteria are listed in Appendix II. The indicators in blue are those that are new to the study in 2011 and were not included in the 2007 GEAR study.

<sup>5.</sup> World GDP is the sum of nominal GDP (in US\$) across 201 countries. Data for GDP and Population are EIU estimates for 2010.



A global index and benchmarking study

#### Category and indicator framework

1 CITIZEN-TO-GOVERNME	.NT	(C2G)	
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- 1.1 Income tax payments
- 1.2 Social security contributions
- 1.3 Obtaining/paying for an ID card
- 1.4 Automotive costs: tolls and fines
- 1.5 Public transit payments

#### 2 GOVERNMENT-TO-CITIZEN (G2C)

- 2.1 Income tax refunds
- 2.2 Social security benefits
- 2.3 Unemployment, workers' compensation and welfare benefits
- 2.4 Government health benefits

#### 3 BUSINESS-TO-GOVERNMENT (B2G)

- 3.1 Income tax payments
- 3.2 VAT/sales tax payments
- 3.3 Social security and other contributions
- 3.4 Company registration and payment of fees

#### 4 GOVERNMENT-TO-BUSINESS (G2B)

- 4.1 Income tax refunds
- 4.2 VAT/sales tax refunds
- 4.3 Payments for goods and services
- 4.4 Disbursement of loans

#### 5 INFRASTRUCTURE

- 5.1 Number of ATMs per 10,000 people
- 5.2 Number of POS terminals per 10,000 people
- 5.3 Diffusion of broadband
- 5.4 Public-access terminals per capita
- 5.5 Mobile subscriptions per 100 people
- 5.6 Level of development of stored value cards
- 5.7 Level of development of 3G and other technologies
- 5.8 Level of development of contactless and mobile payments

#### 6 SOCIAL AND ECONOMIC CONTEXT

- 6.1 Literacy level
- 6.2 Educational level
- 6.3 Internet/technology savviness
- 6.4 Percentage of population using banks/other financial institutions
- 6.5 Percentage of businesses using banks/other financial institutions
- 6.6 Provision of financial education
- 6.7 Proportion of businesses placing orders via the Internet
- 6.8 Proportion of consumer orders of goods via the Internet
- 6.9 Percentage of population with payment card(s)

#### POLICY CONTEXT

- 7.1 Government commitment to e-payment security
- 7.2 Government commitment to integrating the informal economy
- 7.3 Government commitment to the Financial Action Task Force (FATF)



# **Category results**

### **Overview**

The following sections provide an overview of the findings by category. The seven categories should be considered as interrelated aspects of the e-payments landscape. For example, Internet/technology savviness (a social and economic context indicator) relies on the availability of various technologies, including mobile-phone subscriptions and broadband penetration (which are captured in the infrastructure category). This example suggests that a comprehensive approach should be taken in evaluating countries' e-payments adoption results. Indeed, the countries that perform the best in the 2011 study—the US, the UK and Norway—all do well across each of the seven categories captured by the research. With this in mind, the sections that follow provide an overview of the key findings in each of the categories. The analysis highlights top performers and trends, opportunities for improvement and noteworthy findings and initiatives for each of the seven categories.



# Citizen-to-Government (C2G)

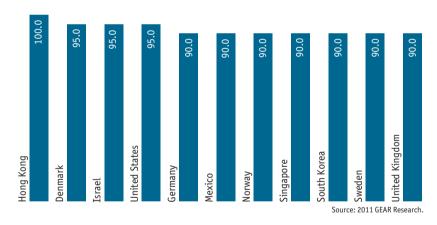
This category captures the extent to which citizens can complete various transactions electronically. These transactions are: income tax payments, social security contributions, obtaining/paying for an ID card, automotive costs and public transit payments.

#### Top performers and trends

With a perfect score, Hong Kong is the clear winner in the C2G category, closely followed by Denmark, Israel and the US (see chart Hong Kong is top). Hong Kong receives the highest possible score across all five indicators in this category, reflecting the relatively trouble-free access to government e-payment services. Income tax is easily calculated and filed online in Hong Kong, and employee contributions to the Mandatory Provident Fund, the state retirement fund, are also electronic. Notably, citizens can use the Octopus smartcard on all forms of public transport and, increasingly, at retail outlets as well. Moreover, homeowners can pay quarterly government rents and rates on their properties online, while citizens can pay driving licence fees, traffic fines and road tolls electronically.

Governments are making progress in automating income tax payments and social security contributions

Hong Kong is top Citizen-to-Government



6. The 2007 and 2011 GEAR studies differ in a number of important ways. First, the number of countries covered by the research increased from 43 in 2007 to 62 in 2011. Second the indicators used to evaluate countries increased. and some indicators that were retained were modified. Finally, the standards used to evaluate countries in 2011 were higher than in 2007. In order to make an accurate comparison between each study, the EIU analysed only the changes witnessed in the original countries researched in the 2007 study, and for an identical set of

The collection of taxes is essential for governments to function. It therefore comes as no surprise that they are rather good at efficiently collecting what is owed to them. The vast majority of countries (just over 90%) have a system in place for calculating and filing income tax electronically. Government initiatives in this area have paid off in recent years. The all countries average score for income tax payments has jumped by nearly 15 points to 84.9 since 2007<sup>6</sup>. Around two-thirds of countries have systems that suffer no major drawbacks, leaving just a handful of countries with no electronic system in place. Countries have made similar gains with social security contributions. According to the research, 77% of countries have an e-payment system in place, while the average score for social security payments has increased by a solid 15 points to 73.8 since 2007.





Today some 84% of countries have electronic and/or automated payment systems for vehicle-related costs such as fines and tolls, yet only 40% of the countries in the study receive a perfect score—there is still room for improvement. Other ways in which countries are taking action include installing electronic-toll collection facilities on roads and bridges. Vehicles equipped with a transponder are charged automatically as they pass through the toll gate, helping to alleviate traffic congestion and streamline toll collection.

#### **Opportunities for improvement**

To most drivers a trip to the government office in charge of issuing new or replacement driving licences can be cumbersome, owing to long queues, inconvenient hours, or an onerous process. On the other hand, governments cite the risk of identification fraud and resulting security threats as grounds for an in-person requirement<sup>7</sup>.

Denmark, Israel and the US all fall short of a perfect score in this area: citizens in those countries are required to appear in person to obtain and pay for driving licences. In the US, most states require a visit to the local Department of Motor Vehicles to obtain and pay for a driving licence. In some US cities the introduction of electronic terminals to process some vehicle-related costs is a still a newsworthy event, suggesting that many parts of the country have some way to go in rolling out electronic services in this area. Standout countries in this area are Bahrain, Hong Kong, Mexico, Qatar and the UK, which offer convenient e-payment services for citizens.

Iran, Tunisia and Ukraine have the most ground to make up in the C2G category. Iran is beta-testing a system for government and private entities to pay employee income taxes online. Currently, employers submit forms on behalf of employees in person to the local tax authority. While Tunisia has taken steps to set up government e-payment systems, recent political turbulence there may slow the adoption of e-payment services in the short term. The government of Ukraine, meanwhile, offers little in the way of C2G e-payment platforms.

#### **Noteworthy findings**

Government services are increasingly at one's fingertips. Given that Hong Kong is the best performer in this category, it is not surprising that it has recently rolled out a standout C2G initiative. In December 2010 MyGovHK, a personalised portal through which citizens enjoy integrated access to various government service accounts and information, was revealed to the public. The portal allows citizens to request and receive government information of their choice, and is linked directly to the users' government records (such as existing eTAX accounts). Some payment facilities are available<sup>8</sup>. Not to be outdone, in June 2011 Singapore launched mGov@SG, a centralised mobile website that helps users access and take advantage of the m-services provided by the government. The site serves as a directory and provides mobile-phone applications for government services. A platform to enable mobile payment capabilities, for both public and commercial services, is currently in development. The utilisation of a mobile platform comes as no surprise in a country where there are more than 4.7m 3G subscribers (representing 66% of the total subscriber base) and where 3G is now the norm.

7. 2011 GEAR Research.

8. MyGovHK was not used as the primary source for the 2011 GEAR study for Hong Kong.

2011 Government E-Payments Adoption Ranking

#### **Octopus in Hong Kong**

Many cities now use smartcards as a payment system for public transit networks. These systems were designed initially to replace paper tickets and have now evolved to offer individuals greater opportunities for use on multiple transport modes and/or integration with financial institutions, allowing for automatic top-ups using bank account or credit card details. Most of these cards remain closed-loop cards, meaning that they are accepted by one merchant, usually the transport authority. However, this is not the case in Hong Kong, where an Octopus card can do a whole lot more than just get you around town.

The Octopus card has been around since 1997, and is increasingly being used in more innovative ways. The card can be used on all forms of public transport, and its contactless card system can also be used at cinemas, sports grounds, hospitals, car parks, vending machines and most retail stores in Hong Kong, from fast-food kiosks to department stores. Recent innovations enable cardholders to pay mobile-phone bills at self-service terminals, purchase umbrellas

from vending machines at railway stations or use the card as a form of access control at more than 220 residential and commercial buildings in Hong Kong. Most children in Hong Kong have an Octopus card, which is used at more than 180 schools for access control, recording attendance and the payment of ad hoc fees. There are currently 24m Octopus cards in circulation, processing 11m transactions a day for a total value of more than HK\$100m (US\$12.8m)9. Around 95% of people living in Hong Kong own an Octopus card.

Hong Kong has also been quick to realise that the technology need not be in card form. Today individuals can own the Octopus technology in the form of an Octopus ornament, a watch with Octopus functionality built in, an Octopus mobile-phone cover or a two-in-one credit card that doubles as an Octopus card 10.

Octopus is arguably the world's most advanced smartcard payment system, with more than 60,000 readers used by over 4,000 service providers. The government of Hong Kong is effectively the biggest shareholder of Octopus Holdings (the company that operates Octopus cards) via its stake in the five companies that own and operate the transport network. As such, Hong Kong received the highest possible score in this study's measure of public transit e-payments.

# **Government-to-Citizen (G2C)**

This category assesses the extent to which various government transfers to citizens can be completed electronically. These transactions are: income tax refunds, social security benefits, government health benefits and unemployment, workers' compensation and welfare benefits.

#### **Top performers and trends**

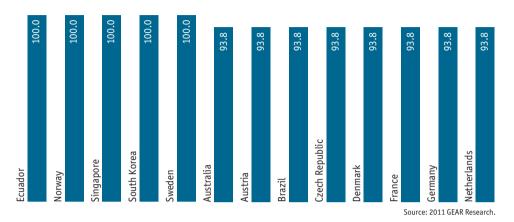
Ecuador stands out as a leader in this category, alongside more developed countries including Norway, Singapore, South Korea and Sweden (see chart *The leaders receive top marks*). Ecuador is one of only three countries from the Latin America and the Caribbean region to achieve above-average scores (the other two are Brazil and Chile). The country's Internal Revenue Service and the Ecuadorian Institute of Social Security facilitate various e-payments, including electronic tax refunds, social security payments, unemployment, workers' compensation, welfare and government health benefits, among other payments. Co-leaders Norway, Singapore, South Korea and Sweden also have similarly comprehensive systems for G2C payments.

9. "Value Chain Flexibility with RFID: A Case Study of the Octopus Card", Lam Tak Min, International Journal of Engineering Business Management, Volume 3, Issue 1, 2011 (pp 44-49).

10. Ibid.







#### Opportunities for improvement

The number of benefit recipients has increased in recent years as unemployment has risen in most countries. High unemployment figures are observed in both developed and emerging economies, while food insecurity<sup>11</sup> has also increased in some countries. Despite the greater demand, few governments have taken advantage of electronic platforms in order to increase efficiency in the distribution of payments such as unemployment, workers' compensation and welfare benefits. Only 10 countries in this study provide citizens with electronic systems to request benefits easily, although there are other means of requesting and receiving such payments<sup>12</sup>. A further 17 have a system in place that has one major drawback, such as an in-person requirement for an unemployment insurance application. Governments have a long way to go in providing e-payment services in this area.

Weaknesses in G2C e-payment development are not region-specific. Five regions—Africa, Latin America and the Caribbean, Southern Asia, Western and Central Asia and Eastern Europe—are represented in the bottom ten countries. Interestingly, Eastern and South-Eastern Asian countries fare better, despite the fact that the vast majority of these are developing countries.

#### **Noteworthy findings**

While India's performance in the G2C category is only average in the 2011 GEAR study, it should be recognised for some noteworthy initiatives. Aadhaar, meaning "foundation" in Hindi, is an identification project that was launched in September 2010. The aim of the project is to provide every resident with clear proof of identity through a unique identification number and associated biometric data, which are fed into a national database<sup>13</sup>. The rationale is that Aadhaar will empower the underprivileged to access services such as the formal banking and retail sectors. The system is also expected to reduce the risk of fraud in government subsidy and poverty-alleviation programmes. Existing databases (such as those for ration cards, voter registration rolls and driving licences) will eventually be integrated into the Aadhaar database, streamlining public services and government benefits systems.

Few governments have turned to electronic platforms to disburse benefits

- 11. The Food and Agriculture Organisation of the UN states that food insecurity "exists when people do not have adequate physical, social or economic access to food".
- 12. These 10 countries are: Bahrain, Canada, Denmark, Ecuador, Hong Kong, Norway, Singapore, South Korea, Sweden and Turkey.
- 13. Unique Identification Authority of India: Planning Commission, Government of India (UIDAI) (<a href="https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=com\_content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php?option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov.in/index.php.option=content&view=article&id=153&Itemid=13>">https://uidai.gov



Business-to-Government (B2G)

This category captures the extent to which businesses can complete various transactions electronically. These transactions are: income tax payments, value-added/sales tax payments, social security and other contributions and company registration and payment of fees.

#### Top performers and trends

There are 13 top performers in the B2G category, including the three overall front-runners (US, UK and Norway), and the Dominican Republic, Peru and the Philippines. They each maintain fully developed e-payment systems for businesses to pay income and value-added/sales taxes, as well as social security and other contributions. The systems of the 13 co-leaders (see table *Leading the way*) also allow the automated processing of company registration and facilitate electronic payments.

The 2011 GEAR results point to a striking trend in government e-service availability for income tax and value-added tax (VAT) payment. The vast majority of countries (90%) have a system in place for calculating and filing business income tax electronically and 61% of countries have a system with no major drawback. This suggests that government tax departments are keen to collect what is owed from businesses through efficient electronic systems. Meanwhile, 86% of countries have a similar system for VAT or sales tax. The electronic payment of employee social security contributions by businesses is also an area of strength globally.

# **Leading the way**Business-to-Government

Rank	Country	Score
=1	Australia	100
=1	Austria	100
=1	Canada	100
=1	Dominican Republic	100
=1	Germany	100
=1	Israel	100
=1	Norway	100
=1	Peru	100
=1	Philippines	100
=1	Singapore	100
=1	Taiwan	100
=1	United Kingdom	100
=1	United States	100

Source: 2011 GEAR Research.

#### **Opportunities for improvement**

In an environment of fierce competition to attract and retain businesses, some governments may not be doing enough to make their markets business-friendly. While some countries offer electronic services for various transactions, many do not. Out of the so-called BRIC countries (Brazil, Russia, India and China), only Brazil scores above average in this category (albeit by a slim margin). India allows businesses to register and, in some cases, pay associated fees online. Brazil, China and Russia have systems in place, but each has at least one drawback. For example, in Russia businesses must register at a local unit of the



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Some governments can do more to make their markets businessfriendly Federal Tax Service and the State Pension Fund. In Brazil initiatives vary significantly by state.

The countries of the Gulf Co-operation Council (GCC)—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE)—perform relatively poorly in this category. Most Middle Eastern countries do not levy income taxes. The EIU used the zakat, an Islamic religious tax, as a proxy for evaluating e-payment capabilities for B2G income tax payment in these countries <sup>14</sup>. Of the six GCC countries, Kuwait, Qatar and the UAE have facilities for businesses to pay zakat online <sup>15</sup>. For the most part, the low category scores for Middle Eastern countries in B2G mirror their low scores in the G2B category, pointing to a general lack of investment in e-payment systems to facilitate business operations. Only Bahrain and the UAE have some online system in place for company registration and the payment of fees. With the exception of Saudi Arabia, none of these countries has electronic facilities for social security contributions, although the UAE has an e-service facility in development.

#### **Noteworthy findings**

Norway's Altinn ("allin") electronic platform is a standout initiative in the B2G area<sup>16</sup>. Altinn was introduced in 2004 and is a so-called point of single contact for small- and medium-sized businesses. The Altinn platform allows businesses to submit forms, including those for taxes and licences, to the relevant government ministries from one website. In addition, by providing businesses with the necessary forms, information and instructions, the platform helps to facilitate electronic payments to various government agencies and ministries. Altinn is leading the way as it continuously improves the efficiency of government e-service administration. The results have been so impressive that the system was introduced to Chinese tax authorities at a World Expo 2010 exhibition in Norway. Australia is another standout country in the B2G category. While a portal similar to that of Altinn is not available in Australia, the relevant government agencies and ministries allow businesses to make numerous e-payments electronically. This earns Australia top marks in this category.

# **Government-to-Business (G2B)**

This category captures the extent to which various government transfers to businesses can be completed electronically. These transactions are: refunds for income and value-added/sales taxes, payments for goods and services and the disbursement of loans.

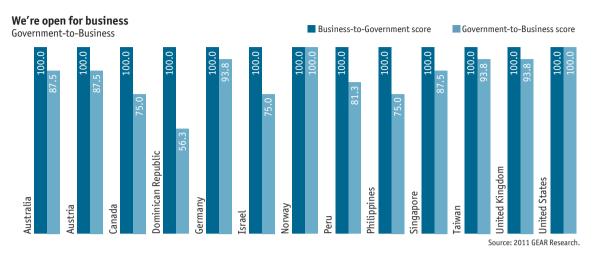
#### Top performers and trends

The old adage "it is better to give than to receive" does not extend to G2B payments. Indeed, the all countries average score for G2B is nearly 15 points lower than for B2G (see chart We're open for business to see how the top performers in the B2G category fared in the G2B category). Why is this the case? Part of the answer lies in the indicators: the categories share two out of four indicators. However, for those two sets of indicators—income tax payments/refunds and VAT/sales tax payments/refunds—the results are telling. While 38 governments allow firms to make e-payments for income taxes, just 31 offer a similar system for refunds. The figures are similar for VAT/sales tax.

The other half of the equation is the countries' performance in payments for goods and services and the

- 14. In many Middle Eastern countries, zakat is applicable to both individuals and businesses. In some countries it is obligatory, whereas in others it is voluntary.
- 15. A notable exception among GCC countries is Oman, which applies a corporate income tax. Interestingly, Oman's government e-portal states that corporate taxes can only be paid with cash or cheque. Oman does not apply a personal income tax.
- 16. Altinn (<a href="https://www.altinn.no/en/">https://www.altinn.no/en/</a>).





disbursement of loans. Many countries have online procurement systems, although they vary to an extent in terms of their capabilities. A fine example is Norway, where the relevant government entities handle epayments according to national procurement procedures. Businesses simply have to register with Doffin, the national database for public procurement. Another top performer in this area is Australia. Payments are handled electronically in AusTender, which allows for e-payment distribution and settlement. AusTender also provides a centralised publication of Australian government business opportunities, annual procurement plans, multi-use lists and contracts awarded.

#### **Opportunities for improvement**

Governments are not doing as well in terms of disbursing loans electronically to businesses, although there are a few notable exceptions. Ten countries, including overall top-performers Norway, South Korea and the US, receive top marks in this area<sup>17</sup>. The US Small Business Administration has a model electronic loan disbursement programme, while South Korea has a more decentralised system in place, with numerous government agencies providing loans to businesses via direct deposit. Norway collects another star in this category, with its Innovasjon Norge providing a simple platform for businesses to apply for and receive loans. However, 21 countries have no system in place for businesses to apply for and receive loans electronically. The other half of the countries in question fall somewhere in-between, suggesting there is much room for improvement in this area.

### **Noteworthy findings**

Interestingly, all of the EU member states covered in this research score well above average in this category. In particular, Ireland, the Netherlands and Norway receive the highest possible score. These EU member states have advanced systems in place for G2B e-payments, including tax refunds and the disbursement of loans. For large firms and all public bodies in Ireland, e-filing and e-payment of taxes is mandatory and refunds are made by electronic transfer—a sign that the government takes seriously its commitment to streamlining these processes. Moreover, Irish contracting authorities are required to use etenders.gov.ie and to publish electronically procurement opportunities of more than €10,000 (around US\$14,490). Dutch and Norwegian firms benefit from very similar systems in their domestic markets, almost undoubtedly allowing firms to make efficiency gains.

EU member states set an example with their G2B e-payments initiatives

<sup>17.</sup> The other countries are: Chile, Czech Republic, Hong Kong, Ireland, Israel, the Netherlands and Turkey.



#### Infrastructure

This category examines the existing technological infrastructure that supports the adoption of e-payments. It comprises indicators that assess the number of ATMs and point-of-sale (POS) terminals per 10,000 people, the diffusion of broadband, public-access terminals per capita, mobile subscriptions per 100 people, the level of development of stored value cards, the level of development of 3G and other technologies, and the level of development of contactless and mobile payments.

#### Top performers and trends

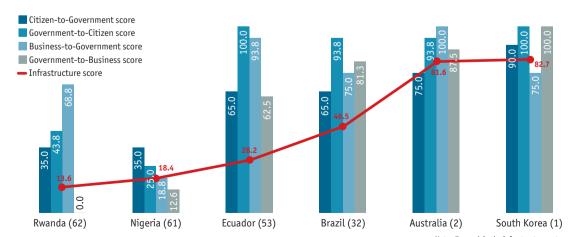
Since 2007 there has been a marked global improvement in technological infrastructure. More than half of the countries included in this research receive high marks for the level of development of 3G and other technologies. Interestingly, despite the significant strides made in recent years in the development of 3G and even 4G services, the slow-and-steady 2G service based on the Global System for Mobile Communications (GSM) quietly remains the most widely used mobile-phone technology in the world. Meanwhile, the diffusion of broadband, an area of relative weakness in the 2007 research, has witnessed significant gains. Moreover, mobile subscriptions per 100 people have skyrocketed since 2007.

Infrastructure has long been recognised as an important factor driving economic growth. Information and communication technology plays an immense role in bridging economic and social divides and diminishing overall levels of poverty. Technological development is similarly essential to governments in their provision of electronic services to citizens and businesses. This is supported by the results of the 2011 GEAR study (see chart *Infrastructure performance and e-payments availability*, which shows how select countries perform in the infrastructure category and how well these governments deliver e-payment services to citizens and businesses). The study found that there is a strong positive correlation between scores for infrastructure and those for three out of the four transaction categories <sup>18</sup>. There is also a high positive correlation (0.88) between overall scores and infrastructure category scores, and a

Technological development is an important factor in government provision of e-payment services

#### Infrastructure performance and e-payments availability

Comparing scores across categories



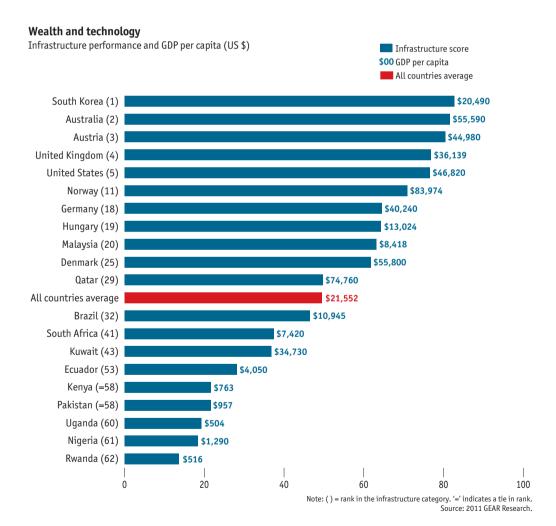
18. The correlations for C2G, G2C and G2B are 0.81, 0.66 and 0.72 respectively. B2G has a relatively weaker correlation (0.52) with infrastructure scores.

Note: () = rank in the infrastructure category. Source: 2011 GEAR Research.



relatively high positive correlation between the overall scores and the majority of individual indicators that comprise the infrastructure category.

The top five performers in this category—South Korea, Australia, Austria, the UK and the US—tend to also score well in the transaction categories. This suggests that these governments are both providing e-payment services and that they have the infrastructure in place that allows citizens and businesses to access e-payment services. But there are other countries—for example, Brazil and Ecuador—that receive below average scores in the infrastructure category, but generally perform above average in the transaction categories. This implies that some countries have taken steps to make e-payments available, but that access to these services may be lacking because of the current state of the country's technological infrastructure.





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Countries with high scores in this category typically have relatively high GDP per capita. However, some countries deviate from this trend (see chart *Wealth and technology*, which shows select countries' GDP per capita and their performance in the infrastructure category). For example, Kuwait has a GDP per capita of US\$34,730 (compared with an all countries average of US\$21,552), but scores below average in the infrastructure category. Its weak score in part reflects the fact that the country has just 1.5 broadband connections per 100 people, which is exceedingly low for a country with such high GDP per capita. In contrast, Hungary and Malaysia have relatively low GDP per capita (US\$13,024 and US\$8,418 respectively), but score better than average in the infrastructure category. The level of development of 3G and other technologies, the availability of public-access terminals, and the level of development of contactless and mobile payments all contribute to the high scores achieved by these countries in the infrastructure category. These countries are exceptions to the rule, and make it evident that wealth does not always translate into the solid development of technological infrastructure.

#### **Opportunities for improvement**

All of the countries in this research have room to improve in terms of infrastructure development. Governments (and, in many cases, the private sector) must continually invest in new infrastructure as technologies emerge and evolve. In addition, more can be done in terms of the geographical deployment of technological infrastructure. Disparities in the presence and quality of infrastructure available in rural and urban areas are common. Oftentimes, the availability of technology (eg public-access terminals or 3G technologies) is restricted to major cities. For example, although public-access terminals are generally available in urban areas throughout South Africa, deployment in rural areas is not yet widespread. This suggests that there are significant gains to be made to ensure that technological infrastructure is available to all citizens and businesses.

However, having infrastructure in place is just one piece of the puzzle. Citizens and businesses must be keen to take advantage of e-payment services. For example, while contactless and mobile payments are on the rise globally, some countries are encountering slow uptake, even when the infrastructure is already in place. A number of mobile and contactless payment initiatives have been introduced in Germany, but the population has yet to move away from more traditional payment methods. Societal factors will continue to affect how and where technologies are adopted.



#### **Noteworthy findings**

# Mobile technologies: An opportunity for governments to close the gap

There is a noticeable relationship between economic development (as measured by GDP per capita) and the diffusion of broadband. Governments in less-developed countries are overcoming a lack of Internet infrastructure and taking advantage of the infrastructure already in place—namely, mobile-phone networks. Increasingly, mobile phones are viewed as computers, with capabilities ranging from Internet access to word processing.

Certainly, mobile phones are more common than bank accounts in some less-developed markets: Kenya, Nigeria, Rwanda and Uganda had more mobile-phone subscriptions than bank accounts per 100 people, according to 2009 figures from the International Telecommunication Union, a UN agency responsible for information and communication technologies. When citizens do not have bank accounts or access to computers, providing e-payment services is difficult. Some governments, lacking the financial and technological infrastructure present in many developed countries, have started to take advantage

of the technological infrastructure available to them. In particular, governments have begun to use mobilephone technology to transfer payments and provide services to citizens. In India's Andhra Pradesh state. one such initiative allows the disbursement of welfare payments and pensions directly into users' bank accounts via a special handset, which is a combination of a mobile phone, a fingerprint reader and a small printer<sup>19</sup>. Another well-known mobile payment initiative is M-PESA. This service originated in Kenya in 2007 and allows users to transfer cash via text messages<sup>20</sup>. It has more than 14m users and has now been expanded to facilitate the payment of salaries and certain bills. Although the government of Kenya has not yet taken full advantage of the capabilities of this initiative, it has collaborated with the UN's World Food Programme and Oxfam, a UK-based non-profit group working towards poverty alleviation, to introduce a pilot cash-transfer programme in a number of Kenyan communities.

Both initiatives point to a significant evolution in the use of mobile technologies to provide services. Governments with low Internet penetration can turn to mobile technologies to offer basic transactional services to businesses and citizens.

<sup>19.</sup> The Economist, "There's an app for that" (<a href="http://www.economist.com/blogs/baobab/2011/02/more\_mobile\_phone\_services">http://www.economist.com/blogs/baobab/2011/02/more\_mobile\_phone\_services</a>).

<sup>20.</sup> Safaricom (<a href="http://www.safaricom.co.ke">http://www.safaricom.co.ke</a>).



# The next big thing: Contactless and mobile payments

The uptake of contactless payments is expected to increase in the coming years. Contactless payment systems are credit cards and debit cards, key fobs, smartcards or other devices that use radiofrequency identification for making secure payments. Technological innovation in contactless payments has moved at a quick pace, and the uptake of mobilephone-based contactless technologies may even outstrip that of traditional card-based contactless payment systems. While some countries, such as the US and the UK, now have a wide deployment of both card-based and mobile-based contactless payment systems, many of the countries in this research are still in the nascent stages of introducing contactless payment systems.

Mobile contactless payment enables users to engage in financial transactions with greater efficiency, combining the convenience of undertaking transactions via a handheld device with the efficiency and security of contactless card payment. With the deployment of mobile contactless payment technology already well under way, those countries that have yet to see significant uptake in contactless payment (which includes the majority of countries in this study) may see usage increase quickly. In these countries, users may leap-frog over card-based technologies and instead utilise mobile-based technologies. There are several reasons for this: in many countries there are more mobile phones than bank accounts, making mobile payments more accessible. According to ARC chart, a UK-based independent research and consulting firm, there are around 400m contactless

cards currently in circulation, accounting for just 6% of all cards. Meanwhile, there are more than 5bn mobile-phone users in the world, and this number is expected to continue to rise in coming years. Accessibility and convenience increase the likelihood of adoption.

Among the countries researched for the 2011 GEAR study, Japan stands out as one of the leaders in adopting contactless technology, with a wide availability of both tap-and-go phones and digital wallet (also known as e-wallet) smartcards, which allow users to make electronic transactions. Edy, one of the most popular contactless cards in Japan, is an integrated circuit card (otherwise known as a smartcard), and is commonly used as a means of storing money<sup>21</sup>. In addition to offering e-money technology via e-wallets, Japan is also a leader in m-payments, with around 47m Japanese (or 37% of the population) undertaking tap-and-go phone transactions.

Mobile contactless payments are under development in both developed and developing markets. New Zealand is among those countries experimenting with near-field communication (a short range, high-frequency wireless communication technology that enables the exchange of data). One of New Zealand's leading banking and financial services groups is testing a mobile contactless payment system. Likewise, in Poland, six of the country's major banks have pilot programmes for contactless mobile payment technologies. Meanwhile, a recent study by Frost & Sullivan, a US-based business research and consulting firm, found that owing to the success of already implemented smartcard programmes in the BRIC countries, these countries appear "the most receptive and ready to adopt smartcards in various verticals", and have "the critical mass needed to sustain these deployments"22.

<sup>21.</sup> Sony Japan (<a href="http://www.sony.co.jp/Products/felica/consumer/index.html?j-short=pcrw">http://www.sony.co.jp/Products/felica/consumer/index.html?j-short=pcrw</a>).

<sup>22.</sup> Frost & Sullivan, "Second Growth Spurt in Smart Cards Market Will Come from the BRIC Region" (<http://www.frost. com/prod/servlet/press-release. pag?docid=224531429>).



### Social and economic context

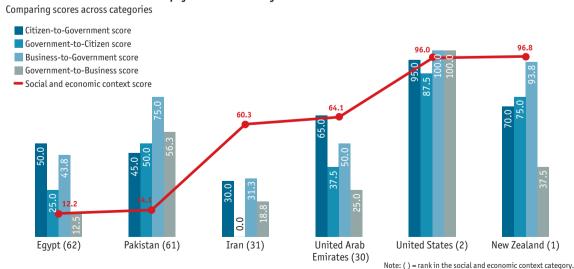
This category examines the social and economic environment that supports the adoption of e-payments. It comprises indicators that assess literacy and educational levels, Internet/technology savviness, the percentage of the population and businesses using banks or other financial institutions, the provision of financial education, the proportion of businesses placing orders via the Internet, the proportion of consumer orders of goods via the Internet, and the percentage of the population with payment card(s).

#### Top performers and trends

High-income countries perform well

Taking the lead and scoring at least 90 points in this category is a group of high-income countries<sup>23</sup>: Australia, Canada, Germany, New Zealand, Taiwan, the UK and the US. These countries enjoy high standards of living, superb infrastructure and have technology-savvy populations. New Zealand receives the top score in this category, even though it ranks a modest 25th overall in the 2011 GEAR study (see chart *Socio-economic conditions and e-payments availability*, which shows how select countries perform in the social and economic context category and how well these governments deliver e-payment services to citizens and businesses). At around 84%, its Internet penetration rate is among the highest in the world. New Zealanders are also keen on technology: around 80% of households have a personal computer, and nearly 60% of mobile-phone subscriptions include a data package, according to the International Telecommunication Union and the World Economic Forum (WEF, a Switzerland-based non-profit foundation). In addition, there are nearly twice as many payment cards in circulation than there are people. In fact, New Zealand performs particularly well across every indicator in the category, with the exception of the percentage of consumers placing orders via the Internet (around 53% of Internet users in the country place orders online).

#### Socio-economic conditions and e-payments availability

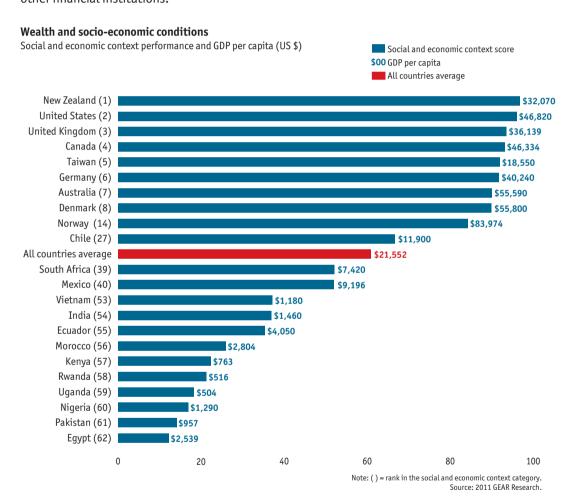


23. The World Bank uses the World Bank Atlas method to divide economies according to their gross national income (GNI) per capita. High-income countries are classified as those with GNI per capita of US\$12,276 or more. World Bank (<a href="http://data.worldbank.org/about/country-classifications">http://data.worldbank.org/about/country-classifications</a>).

Source: 2011 GEAR Research.



Norway, which has the highest GDP per capita of the 62 countries in this study, ranks 14th in this category (see chart *Wealth and socio-economic conditions*, which shows select countries' GDP per capita and their performance in the social and economic context category). It is not that Norway's social and economic environment is poor, but rather that the top-ranked countries set the bar extremely high. Norway performs relatively poorly against its rich-country peers in the provision of financial education, the proportion of consumer orders over the Internet and the percentage of population using banks or other financial institutions.



The 62 countries in this study represent almost 81% of the total world population—or around 5.5bn people. However, the countries that receive an above-average score in this category account for just 19% of the world's population (while accounting for nearly 69% of total world GDP). The findings are similar in the infrastructure category—namely that higher-income countries (those that account for a large share of global GDP) do better than their lower-income counterparts. By the same token, countries performing below average in these categories cumulatively account for a larger percentage of the world population. This implies not only that there is great scope for catch-up in terms of improving the social and economic context and infrastructure, but that doing so will have an impact on a large number of people.



#### **Opportunities for improvement**

Just as with technology infrastructure development, certain social and economic metrics correlate strongly with overall government e-payments adoption. Notably, educational levels, Internet/technology savviness and the proportion of consumer orders placed over the Internet all have a positive correlation above 0.70 with the overall score. Africa has the most room for improvement, as six of the ten lowestscoring countries in the social and economic context category are on the continent. Ecuador, India, Pakistan and Vietnam occupy the other four spots in the bottom ten. Most statistics suggest it will be a long time before African countries catch up. They perform poorly across a number of indicators, including literacy and educational levels and consumer orders via the Internet. In large part, poor performance can be attributed to inadequate infrastructure. Without electricity, computers will not work; and without telephone and broadband lines, there is no Internet. In the absence of basic infrastructure, citizens and businesses cannot access the Internet—and even if they could, the adoption, uptake and convenience of e-payment services would be hindered by the relatively poor access to financial services. African countries typically have low percentages of businesses and citizens with a bank account, without which e-payments are difficult (although not impossible; see Mobile technologies: An opportunity for governments to close the gap for information on how mobile technologies facilitate e-payment services). The top-performing African country in this category, South Africa, comes in at 39th (and is 35th overall).



# Noteworthy findings

# Facilitating government e-payments initiatives

The results of the 2011 GEAR study reveal a significant relationship between Internet/technology savviness and economic development. Countries that receive the lowest scores overall all have GDP per capita of less than US\$20,000. Interestingly, all of the countries receiving the lowest scores for Internet/technology savviness have a GDP per capita below US\$10,000. The poorest countries in this group (Kenya, Pakistan, Rwanda, Uganda and Vietnam) also score below the all countries average across all four transaction categories in the 2011 study. This implies that lessdeveloped countries are likely to have a population that is not particularly technologically savvy, as well as weaker adoption of government e-payment services. This relationship between Internet/technology savviness and GDP per capita is reflected in a high positive correlation (0.76). This strong correlation implies that oftentimes as GDP per capita increases, so too will Internet/technology savviness.

A common explanation for a lack of Internet/
technology savviness is poor technological
infrastructure and limited access to computers and—
perhaps more importantly—the Internet. According
to the WEF, the countries that receive the lowest
scores for Internet/technology savviness in the 2011
GEAR study have a household computer penetration
rate (defined as the percentage of households with
a personal computer) of less than 30%, compared
with an average penetration rate of 36% for the
136 countries in the WEF study. The countries that

score top marks for Internet/technology savviness in the 2011 GEAR study had a household computer penetration rate of at least 69%.

While Internet penetration levels (and, in particular, broadband penetration) are also low in the countries that receive the lowest Internet/ technology savviness scores, the number of mobile subscriptions per 100 people tends to be quite high. Indeed, mobile penetration averages 83% in these countries. Some governments are keen to make the most of mobile technology, taking advantage of the prevalent familiarity with mobile technology and providing e-payment services via mobile phones. M-PESA is perhaps among the most well-known of these initiatives. Another available initiative is Uganda's MTN MobileMoney, which allows users to transfer money domestically via mobile devices. MTN MobileMoney, a service of a South Africa-based communications and network access company<sup>24</sup>, has recently launched an upgrade that links a customer's mobile account to a bank account, thereby allowing users to withdraw money directly from an authorised MTN MobileMoney agent. The service also allows users to pay utility bills and buy airtime using their mobile device.

Investing in these kinds of technologies and innovations is often a resourceful way of overcoming barriers, including a lack of technological savviness among the population, and could help to spur the uptake of e-payment solutions in developing markets. Other initiatives are also important, including basic literacy (without which access to a computer or other device is futile) and the provision of financial education, which lends itself to a sense of security for those undertaking e-payments.

24. MTN Uganada (<a href="http://mtn.co.ug/MTN-Services/Mobile-Banking/MTN-MobileMoney.aspx">http://mtn.co.ug/MTN-Services/MobileBanking/MTN-MobileMoney.aspx</a>).



Government policies

and commitment are

essential to improving

e-payments adoption

## **Policy context**

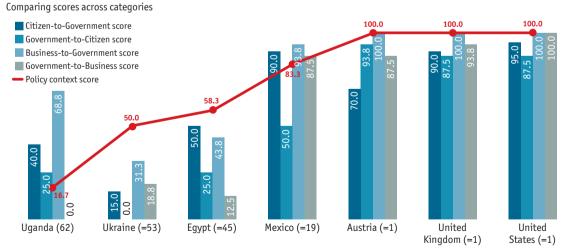
This category provides an assessment of the policy environment that helps to support e-payments adoption. It comprises indicators that assess government commitment to e-payment security, integrating the informal economy and the Financial Action Task Force.

#### Top performers and trends

The top performers in this category—Austria, the UK and the US—all attained the highest possible score. What sets these countries apart from the rest? First, their commitment to e-payment security. These countries all maintain strict regulations in this area, helping to assure citizens and businesses alike that e-payments are secure. That is not to say that there are no fraudulent activities, but rather that they have in place a strong foundation for securing payments and enforcing regulations. For example, in response to threats to Internet security, the UK government has set aside £650m (around US\$1bn) for a four-year National Cyber Security Programme<sup>25</sup>. This initiative engages a number of government departments and outlines efforts to establish cross-border as well as domestic cyber-crime detection, defence and prosecution of crimes.

The top-scoring countries are also committed to integrating the informal economy. According to the World Bank, the informal economy accounts for less than 15% of GDP in each of these countries, compared with 33% in Egypt, around 40% in Uganda and nearly 50% in Ukraine. Finally, each has a serious outlook on financial crimes, particularly those relating to money-laundering and terrorist financing, and adheres to the recommendations of the Financial Action Task Force (FATF).

#### Government policy and e-payments availability



Note: ( ) = rank in the policy context category. '=' indicates a tie in rank.

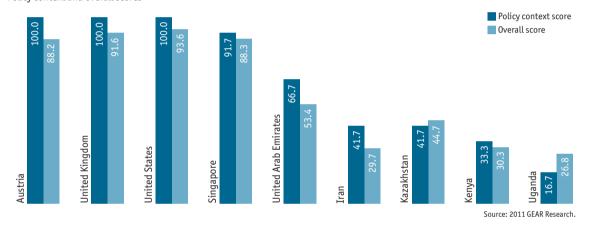
25. UK National Cyber Security Programme, "Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review", presented by the Prime Minister by Command of Her Majesty, October 2010 (< http://www. direct.gov.uk/prod\_consum\_dg/ groups/dg\_digitalassets/@dg/@ en/documents/digitalasset/ dg\_191634.pdf?CID=PDF&PLA=furl &CRE=sdsr>).

Government policies, initiatives and regulations are key to spurring innovation and the uptake of e-payments, which is hindered by a lack of trust. Regulations to secure e-payments are essential in helping to ensure that payment cards are not abused by fraudsters. Initiatives to integrate the informal economy are also crucial if e-payments are to increase (see above chart Government policy and e-payments



availability to see how select countries perform in the policy context category compared with the transaction categories). Programmes to improve financial inclusion—the provision of financial services at affordable costs to society—bring greater numbers of citizens and businesses into the financial fold. Financial inclusion also facilitates access to government services, such as welfare benefits and loans. These efforts are commendable and pay off in terms of lowering poverty rates. The close ties between government commitment and e-payments adoption are reflected in the high positive correlation (0.78) between the policy context category and overall scores in the 2011 GEAR study (see chart Government commitment and e-payments adoption to compare performance across select countries).

# **Government commitment and e-payments adoption**Policy context and overall scores



#### **Opportunities for improvement**

At the other end of the spectrum are Kenya and Uganda, both of which have much ground to make up in this category. Kenya has huge gaps in its regulations surrounding e-payment security. Despite acclaim for a mobile-phone-based payment service, M-PESA, there are legitimate concerns regarding the security of e-payments. At the time of M-PESA's launch in 2007, there was a lack of legislation governing payment systems, e-money, bank agents, consumer protection and other potential risks to financial security. Perhaps recognising these shortcomings, the government has recently begun to amend the regulatory framework to include provisions on the use of agents to provide a wide range of banking services, including the disbursement of loans, bill payments and mobile-phone airtime top-ups. However, much still needs to be done in order to assure those who utilise e-payments that their bank account or credit card will not fall victim to abuse. Uganda fares even worse than its neighbour in this area, with no clear e-payments policy in place, let alone an e-payments security framework. Neither country is particularly committed to the FATF.

E-payments help to shrink the size of the informal economy. Past research has suggested that e-payment systems help to curb informal market activity by creating a robust audit trail. In addition, this research has shown that there is a strong negative correlation (-0.70) between the use of electronic payments (as measured by the average number of electronic transactions per inhabitant per year) and the size of a country's informal economy<sup>26</sup>. This research is complementary to the 2011 GEAR study, which

26. A.T. Kearney, The Shadow Economy in Europe (<a href="http://www.atkearney.com/index.php/">http://www.atkearney.com/index.php/</a> Publications/the-shadoweconomy-in-europe.html>).



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evaluates government commitment to the integration of the informal economy. The analysis considers both the size of the informal economy (as a percentage of GDP) and the existence of a strategy document for financial inclusion. The study shows that there is a moderate positive correlation (0.42) between this indicator and the overall score. Only around one-third of the countries researched in the 2011 GEAR study have a strategy document in place, which is consistent with the results observed in the Financial Access 2010 report (45% of the 141 economies surveyed by the Consultative Group to Assist the Poor have a strategy document). The results of the 2011 GEAR study indicate a general need for countries to take more formal steps to mitigate and integrate the informal economy.

Governments are increasingly expected to take steps to function with the efficiency of the private sector. The private sector is seemingly more efficient, in part because it typically adopts technologies more quickly than the public sector. When governments outsource functions to the private sector, e-payment services may be introduced where none previously existed. One example of public-private sector collaboration is in Canada, where the government utilises 17 private-sector lenders to disburse government-funded business loans. Governments often recognise that they do not have the resources (particularly financial) or the expertise to provide citizens and businesses with the best services, making outsourcing a potential option.

#### **Noteworthy findings**

#### Promoting electronic payments adoption

Governments have made great strides in recent years in promoting electronic payments. Initiatives are grounded in securing electronic payments, but typically go well beyond regulation to encourage citizen and business uptake of e-payment services. Some countries offer direct incentives, such as lower VAT rates when a card is used, or indirectly encourage uptake by, for example, paying government salaries directly to a bank account.

Cash is still king in many countries in the Middle East. However, change is coming rapidly to some countries. As governments look to roll out e-payment services, some are also improving upon existing card payment options. The UAE has recently launched the G2 E-Dirham, which improves upon the existing system by offering users more payment facilities. Elsewhere, Oman rolled out its electronic purse initiative in 2009. An electronic purse replaces the use of credit or debit cards in electronic transactions. In Oman, the e-purse

is a national ID card embedded with an electronic chip. The ID can be loaded with money using cards or bank accounts and used in paying for government goods and services, making payments to various government agencies, such as the Royal Oman Police, and for conducting commercial transactions. The government's objective in introducing the e-purse system is to increase security, efficiency and convenience. While the government has certainly made enormous strides in terms of promoting e-payments and e-government in recent years, there are drawbacks to the e-purse initiative—namely, the card can only be used for transactions within Oman, meaning that online purchases abroad are not facilitated by the e-purse.

This highlights a broader issue for governments in their efforts to encourage electronic payments: e-commerce is increasingly global, but regulations, currencies and even languages are not the same across borders. Governments around the world are taking varying steps to encourage e-payments and the systems implemented take on a number of different forms.



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#### Focusing on e-payment security

More than one-third of the 62 countries in this research receive the highest possible score for their efforts to promote electronic payment security. Governments have responded to citizens' concerns over fraud and identity theft by implementing and enforcing regulations relating to electronic transactions. Two countries stand out: Singapore and Sweden both receive the highest marks in this research, and are ranked first and second in the WEF's Global Information Technology 2010–2011 ranking of laws relating to the use of information and communication technologies (eg, electronic commerce, digital signatures, consumer protection). Most governments view security as the foundation of a positive e-payment environment.

Singapore has gone beyond implementing the legal framework necessary to ensure security. In 2001 a National Trust Council (NTC) was formed to help boost public confidence in electronic transactions and spur growth in e-commerce. NTC supports TrustSg, an online shopping directory where accredited domestic businesses can list their products and services<sup>27</sup>. The

TrustSg seal on a merchant website tells consumers that electronic transactions are processed securely. This is just one example of a trustmark organisation; trustmarks are one of the key mechanisms for boosting consumer confidence and self-regulation in ecommerce.

However, challenges remain: standardising codes of conduct, dispute mechanisms and other securityrelated processes across borders is an arduous and long-term process. In order for consumers to feel secure in making purchases from other countries, there will need to be much more global co-ordination in this area so that the e-commerce market can become truly global. Even in countries like Sweden, where more than 90% of the population makes purchases online and domestic e-commerce regulations are robust, Internet security acts as a barrier to consumer purchases from foreign countries. According to an E-commerce without Borders study undertaken by the Swedish Trade Federation<sup>28</sup>, the leading reason cited for not shopping at foreign websites is distrust of the security of the payment data. Governments must think beyond their own border when it comes to regulating the ecommerce market in order for consumers to feel secure in a global e-commerce marketplace.

<sup>27.</sup> Singapore National Trust Council (<a href="http://www.trustsg.sg/index.html">http://www.trustsg.sg/index.html</a>).

<sup>28 &</sup>quot;E-commerce without borders creates new consumer behaviour: A survey of Swedish e-commerce companies and Nordic consumers", Svensk Handel (<a href="http://www.svenskhandel.se/Documents/Rapporter/E-handelsrapport\_engelska.pdf">http://www.svenskhandel.se/Documents/Rapporter/E-handelsrapport\_engelska.pdf</a>).



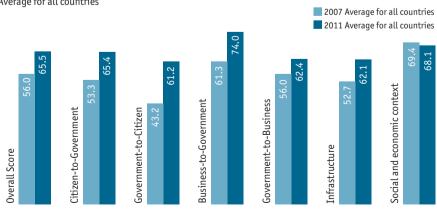
# Moving forward with e-payments: Tracking progress from 2007 to 2011

In this section we consider some of the key changes in the government e-payments landscape between 2007 and 2011. The 2007 and 2011 GEAR studies differ in a number of important ways. First, the number of countries covered by the research increased from 43 in 2007 to 62 in 2011. Second, the indicators used to evaluate countries were broadened, and some indicators that were retained were modified. Finally, the standards used to evaluate countries in 2011 were higher than in 2007. In order to make an accurate comparison between each study, the EIU analysed only the changes witnessed in the original countries researched in the 2007 study, and for an identical set of indicators<sup>29</sup>.

#### Government e-payment strategies: Steady progress since 2007

Governments have continued to make strides in the development of e-payment systems for citizens and businesses since 2007. Indeed, the vast majority of countries included in the 2007 study showed an improvement in their score by 2011 (see chart *Tracking progress by category from 2007 to 2011* to see how the all countries average scores have improved). However, steady progress rather than revolutionary shifts in e-payment systems characterise the period between 2007 and 2011. The EIU has identified a number of areas in which governments are most noticeably progressing and where more work needs to be done.





29. The discussion that follows reflects the results from the cross-time comparison of only those 43 countries and 30 indicators researched in both the 2007 and the 2011 GEAR studies. Please refer to Appendix II for more information on the comparison between 2007 and 2011.

Note: The policy context category in the 2011 research was not a stand-alone category in the 2007 research and therefore is not included in the comparison.

Source: 2011 GEAR Research.

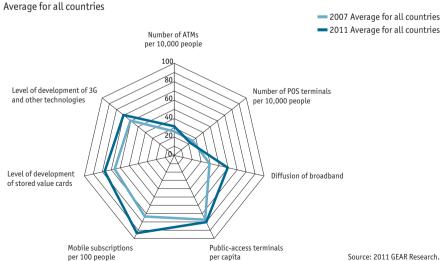


A global index and benchmarking study

#### Trends noted between 2007 and 2011<sup>30</sup>

- (C2G) Automotive costs: Traffic fines, tolls and zone charges are steady sources of revenue for governments, and the means to collect these payments has been an area of strength since 2007. Around half of the countries in the 2007 study had an e-payments system in place that either had no drawbacks whatsoever or a single drawback such as an in-person requirement to pay fines. In 2011 that number had increased to more than 75%—a considerable gain.
- (Infrastructure) Mobile subscriptions per 100 people: Mobile phones are even more widely available today than in 2007. Around 35% of countries received top marks for this indicator in 2007, compared with an impressive 77% in 2011. The spread and popularity of mobile technology around the world is well documented. The greatest gains have been made in developing countries, where a lack of fixed-line infrastructure has encouraged the uptake of mobile phones.
- (Infrastructure) Level of development of 3G and other technologies: As there are few opportunities left in mobile voice markets, mobile operators are increasingly turning to new data services for revenue growth, while manufacturers are looking to sell ever-more sophisticated mobile handsets to consumers. In developed markets, falling hardware costs and the willingness of service providers to offer device subsidies to their customers are bringing these gadgets within reach of the mass market. However, there is also potential for uptake in emerging markets. In 2007 around 40% of countries received top scores for the development of 3G and other technologies. Although this percentage increased only marginally in 2011, the average score for all countries has improved since 2007 (see chart Infrastructure improvements from 2007 to 2011).

#### Infrastructure improvements from 2007 to 2011



30. To ensure an accurate comparison between 2007 and 2011, the analysis considers only the 43 countries and the 30 indicators researched in both 2007 and 2011. Please refer to Appendix II for more information on the comparison between 2007 and 2011.

# **2011 Government E-Payments Adoption Ranking**A global index and benchmarking study



- (C2G) Obtaining/paying for an ID card: As noted previously, this is an area of weakness for countries in the 2011 GEAR study—a trend that has carried through from 2007. Two-thirds of countries still do not have an electronic system that allows citizens to obtain and pay for an ID card or driving licence online. That is not to say that improvements have not been made: around 30% of countries have boosted their score since 2007.
- (G2C) Unemployment, workers' compensation and welfare benefits: Only six countries receive the top score for providing e-payment services for unemployment, workers' compensation and welfare benefits—the same number that received the best mark in 2007. While this is a low figure, it should be noted that governments currently disburse benefits through other means, such as cash or cheques, and many are making progress in terms of e-payments. An extraordinary 65% of countries improved their score in this area since 2007. Given the greater needs of many people in the current economic climate, this is indeed encouraging.
- (Policy context) Government commitment to integrating the informal economy: Here, few countries have progressed since 2007. Although 25% of countries have boosted their score since 2007, the rest have done little (if anything) to bring the informal sector into the fold. Given the economic challenges of recent years, it is not surprising that governments have not prioritised the issue. Nevertheless, governments have much to gain by pushing forward with initiatives in this area. For instance, governments may look to enhance the efforts to cut down on tax avoidance as fiscal austerity measures kick in, and integrating the informal economy is a key facet of such efforts.

#### 2011 Government E-Payments Adoption Ranking

A global index and benchmarking study

# Are governments in 2011 doing things differently from 2007?<sup>31</sup>

The GEAR study in 2007 examined a number of government epayment strategies. Have governments in 2011 continued to prioritise these goals? Here is a snapshot of the strategies prescribed in the 2007 GEAR study and an overview of the relevance of these recommendations after four years:

**Strategy:** Build systems appropriate for the target group, whether citizens or businesses, while striking a balance between accessibility and technological progress.

**2011:** For policymakers, ensuring that the supply of services is matched by demand is still a challenge. Digitising services can prove to be a costly undertaking, although it often pays dividends as operational and other costs plummet. Citizens and businesses use the Internet when it is useful and provides clear benefits. Governments are still learning how to respond.

**Strategy:** Align the goals of G2C services and C2G services. E-payments need not be just a new type of tax collector.

**2011:** Progress towards meeting this goal has been limited to date. C2G services for income tax payments have been modernised faster than G2C income tax refunds. Nevertheless, there has been progress in other G2C areas. Approximately 65% of countries have shown an improvement in their provision of unemployment and

welfare benefits—an encouraging indication that governments are responding to growing demand for services.

**Strategy:** Where identity, fraud and documentation considerations preclude full electronic services, supply information, downloadable forms and electronic appointment systems.

**2011:** Governments must find a balance between offering e-payment services and mitigating security risks. Where governments deem the security risks to be too great, many provide citizens and businesses with the option to book appointments online and download forms. Security systems in many countries continue to improve, although governments still face challenges in managing growing cyber risks.

**Strategy:** Start with widely used, relatively standardised services: tax payments and refunds, social security contributions and procurement. Diffuse services later to other payment types, such as automotive costs and government loans.

**2011:** Governments appear to prioritise automating standard services over other e-payment services. The 2011 GEAR study suggests that the number of countries offering e-payment services for tax payments/refunds, social security contributions and procurement is significantly greater than for many other e-payment services.

Strategy: Improve Internet access.

**2011:** Progress on this front has been tremendous in most countries. This is not surprising given that increasing Internet penetration is a top priority for the majority of governments. Around 85% of countries have succeeded in expanding broadband coverage since 2007.

#### **GEAR** rankings now and then

In this section we consider some of the key changes in the government e-payments landscape between 2007 and 2011<sup>32</sup>.

Canada conspicuously slides from the number one spot in the 2007 study to 11th position in 2011. It is not that Canada is doing worse, but rather that other countries have surpassed it (see *Why 2007 high-achiever Canada lost the lead* below). The US is the new leader, supported by improved scores in the infrastructure and B2G categories. The UK maintains its position in second place, while Germany moves up one spot to third in the 2011 rankings. At the other end of the standings there is little change: Nigeria holds steady in 43rd, while Egypt and Ukraine fell one spot to 41st and 42nd respectively. All three countries have a poor showing across all of the categories in the research.

31. To ensure an accurate comparison between 2007 and 2011, the analysis considers only the 43 countries and the 30 indicators researched in both 2007 and 2011. Please refer to Appendix II for more information on the comparison between 2007 and 2011.

32. Ibid.



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#### Why 2007 high-achiever Canada lost the lead

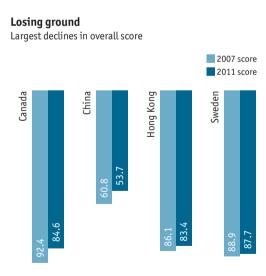
How did Canada fall from first place in 2007 to 11th place in the 2011 GEAR study? Technological advancement has had a significant impact on the methodology and relevance of the GEAR study. This is evidenced by the change in standards for evaluating countries on their level of electronic service provision. The provision of forms for download or user instructions is no longer sufficient to grant countries top marks. It is therefore not surprising to see a top performer from the 2007 study, Canada, experience a number of lower category scores. However, it is important to keep in mind that Canada may have improved its score on some indicators in absolute terms (for

example, the number of POS terminals per 10,000 people in Canada increased from 176.9 in 2007 to 255.6 in 2011) but experienced a drop relative to the improvements achieved by other countries.

Canada consistently scored substantially higher than the all-country average in both 2007 and 2011; however, its improvements have been slower than those made by other countries (reflected in its downward movement in normalised score and, subsequently, its ranking in 2011)<sup>33</sup>. It is important to be mindful that this comparison reflects relative change in performance and not a deterioration of conditions. Similarly, countries that started off as top performers (scoring top marks across most indicators) could show little improvement owing to the fact that other countries made large gains to catch up to the bar they have set, rather than because they have underperformed.

The US replaces Canada at the top A different perspective on cross-time comparisons between the 2007 and 2011 studies comes from looking at countries that received low scores in 2007 and have remained at the bottom of the pack in 2011, irrespective of making absolute improvements. For example, Ukraine found itself ranking last or close to last across all transaction indicators in 2007. Despite some improvements, it found itself in a very similar position in 2011, suggesting not only that it is under-providing electronic services to citizens and businesses, but also that it is slower than other countries in the uptake of e-government initiatives.

The drop in Canada's score is among a number of standout changes observed between the 2007 and 2011 GEAR studies (see chart Losing ground). China, Hong Kong and Sweden experienced similar declines in their scores. This largely reflects greater gains made by other countries in the study, as well as the higher standard to which countries were held in 2011.



Source: 2011 GEAR Research.

<sup>33.</sup> Please refer to Appendix II for an explanation of the normalisation methodology.

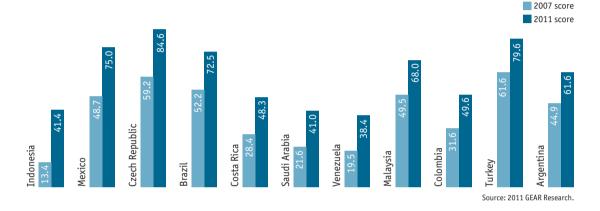


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A significant number of countries, however, improved their positions. On the upward trajectory in the 2011 GEAR study are six Latin American countries, Indonesia and Saudi Arabia, among others (see chart *Improving with time* below). These countries have increased their scores across the majority of categories and indicators. Indonesia has improved the most, receiving higher scores in 2011 for every category.

#### Improving with time

Largest increases in overall score



# Indonesia still ranks low, but improves its overall score

While Indonesia has certainly improved its performance, its rank in the index has remained relatively unchanged. In 2007 Indonesia scored 13.4 and was ranked 42nd out of 43 countries (sharing the bottom with Nigeria and Ukraine). Among the 43 countries researched in both 2007 and 2011, Indonesia scored 41.4 to move up to 37th in 2011. However, with the inclusion of 19 new countries in the latest

study, Indonesia (with a score of 45.7) currently ranks 47th out of 62. This suggests that the inclusion of new countries (some of which have performed worse) helped to prevent Indonesia from ranking at the bottom again. Nevertheless, the country has improved, netting better scores in every category as well as overall. Driving Indonesia's jump in score is the development of G2C e-payment services, with an emphasis on automating social security, welfare and health benefits. Despite still ranking below the overall average of the 62 countries included in this study, Indonesia has nevertheless made notable progress in government e-payments adoption.



#### **Conclusion**

The 2011 GEAR study provides a snapshot of the progress that has been made and the opportunities that remain for greater achievement in government e-payments adoption. The staggering pace of technological advances since 2007 called for countries to be held to a higher standard in the 2011 GEAR study. That standard was met and exceeded by a number of countries. The all countries average rose for most indicators of e-payments adoption. This impressive performance signals that in most cases governments are keeping up with technological developments and are focused on improving e-payment services.

The pace of change and the types of initiatives implemented by governments vary greatly. Early adopters of e-payment services are now pushing the boundaries of e-payment innovation. The South Korean government offers its citizens and businesses more than 150 portals<sup>34</sup>, through which a variety of transactions are facilitated. Hong Kong continues to blaze the trail with its Octopus smartcard, which can be used to pay mobile-phone bills, buy bus passes and check children in at school.

By and large, countries with high GDP per capita tend to have better technological infrastructure and, unsurprisingly, more resources to invest in e-payment adoption and development. The link between infrastructure and e-payment development has not gone unnoticed. A number of countries are exhibiting grand resourcefulness in utilising the technology at hand. In countries where people often lack access to basic banking services or computers, mobile phones have become a means of making and receiving payments and providing services to citizens. Kenya's M-PESA is just one standout initiative that takes advantage of mobile-phone technologies, which are typically more widespread and can be as reliable as traditional fixed-line networks. This is especially true if adequate legislation is in place to help to mitigate the security risks associated with transacting via a mobile phone. Ultimately, a combination of infrastructure and government policy is essential to the improvement of e-payment services.

#### What's next for e-payments?

- There will be continued improvements in infrastructure, including broadband and 3G (and, increasingly, 4G) networks. Advances in infrastructure will help to drive uptake of e-payment services.
- Contactless and mobile payments will see huge uptake in the coming years. With more than 5bn mobile-phone users worldwide, mobile contactless payments are likely to boom. However, governments and service providers will need to ensure that the security around these systems is adequate.

34. EIU Digital Economy Rankings 2010 (<a href="http://graphics.eiu.com/upload/EIU\_Digital\_economy\_rankings\_2010\_FINAL\_WEB.pdf">https://graphics.eiu.com/upload/EIU\_Digital\_economy\_rankings\_2010\_FINAL\_WEB.pdf</a>>).

# **2011 Government E-Payments Adoption Ranking** A global index and benchmarking study



• The number of individuals and businesses utilising financial services will rise, particularly in the developing world. Access will be boosted as mobile banking services are rolled out. Countries in Africa and Latin America will see particularly strong gains in this area.

- E-payment security will remain an important issue for governments, businesses and citizens. Proven security and recourse measures must be in place for the uptake of e-payments to flourish. There is likely to be greater cross-border co-operation in this area.
- There will be a gradual move towards improving existing e-payment services in the areas of tax and benefits in those countries that already have systems in place.
- Governments most likely will continue to prioritise automating standard services such as tax payments/refunds and social security contributions over other e-payment services.
- There will continue to be public/private-sector collaboration on e-payment initiatives. Indeed, such
  collaboration is likely to increase in many countries as some government functions are outsourced to
  the private sector.

Looking ahead, there may be unexpected innovations in some countries, driven for the most part by advances in the private sector. The onus will be on governments not only to keep up with the private sector in terms of technologies, but also to ensure that adequate regulations are in place to secure transactions. This will be no easy feat. Governments will need to ensure that any proposed regulatory framework surrounding e-payments provides sufficient defence against escalating cyber risks but, at the same time, does not impede competition and development within the e-payments sphere.

As governments work toward adopting and improving e-payment services, their strategies will almost undoubtedly reflect each country's unique infrastructure and social, economic and policy context. No single approach to government e-payments adoption is universal, and no one successful strategy is necessarily scalable. The 2011 GEAR study highlights the diversity of government e-payment systems already in place as well as the plethora of opportunities available to governments for improving e-payment services. In spite of financial difficulties, growing populations and the prevalence of security risks, governments are showing that they understand the importance of maximising the reach of e-payment services. What remains to be seen are the specific paths they will take to implement e-payments and improve adoption.



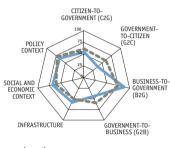
Argentina	46	Mexico	61
Australia	46	Morocco	62
Austria	47	Netherlands	62
Bahrain	47	New Zealand	63
Brazil	48	Nigeria	63
Canada	48	Norway	64
Chile	49	Oman	64
China	49	Pakistan	65
Colombia	50	Peru	65
Costa Rica	50	Philippines	66
Czech Republic	51	Poland	66
Denmark	51	Qatar	67
Dominican Republic	52	Russia	67
Ecuador	52	Rwanda	68
Egypt	53	Saudi Arabia	68
Finland	53	Singapore	69
France	54	South Africa	69
Germany	54	South Korea	70
Hong Kong	55	Spain	70
Hungary	55	Sweden	71
India	56	Taiwan	71
Indonesia	56	Thailand	72
Iran	57	Tunisia	72
Ireland	57	Turkey	73
Israel	58	Uganda	73
Italy	58	Ukraine	74
Japan	59	United Arab Emirates	74
Kazakhstan	59	United Kingdom	75
Кепуа	60	United States	75
Kuwait	60	Venezuela	76
Malaysia	61	Vietnam	76

A global index and benchmarking study



## Argentina

Nominal GDP (US\$ bn)	370.3
Population (m)	40.5
GDP per capita (US\$)	9,140.0



 Argentina Average for all countries

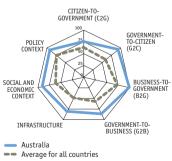
	Rank	Score	Average
OVERALL SCORE	33	59.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=36	55.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=47	37.5	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare bene	fits =11	75.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=26	87.5	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=39	43.8	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	27	57.9	49.5
Number of ATMs per 10,000 people	=41	16.9	28.5
Number of POS terminals per 10,000 people	11	38.2	20.0
Diffusion of broadband	28	30.0	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	15	53.1	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	24	68.8	60.9
Literacy level	25	94.9	80.5
Educational level	17	66.0	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	30	33.4	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=40	66.7	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=54	50.0	83.1



#### **Australia**

Nominal GDP (US\$ bn)	1,234.4
Population (m)	22.2
GDP per capita (US\$)	55,590.0



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BUSINESS-TO- GOVERNMENT (B2G)	I
ENT-TO- (G2B)	(
	I

			Average
OVERALL SCORE	6	88.5	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=19	75.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefits	s =11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

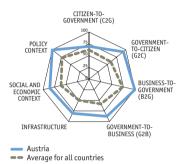
	Rank	Score	Average
INFRASTRUCTURE	2	81.6	49.5
Number of ATMs per 10,000 people	5	71.7	28.5
Number of POS terminals per 10,000 people	4	62.2	20.0
Diffusion of broadband	13	66.4	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	18	52.2	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	7	90.0	60.9
Literacy level	=9	97.8	80.5
Educational level	2	97.8	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=53	25.0	73.4
Proportion of businesses placing orders via the Internet	=1	100.0	41.1
Proportion of consumer orders of goods via the Internet	5	89.2	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

A global index and benchmarking study



#### Austria

Nominal GDP (US\$ bn)	378.6
Population (m)	8.4
GDP per capita (US\$)	44,980.0



	Rank	Score	Average
OVERALL SCORE	8	88.2	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=24	70.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare bene	efits =11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	3	80.4	49.5
Number of ATMs per 10,000 people	9	54.3	28.5
Number of POS terminals per 10,000 people	3	64.2	20.0
Diffusion of broadband	14	65.8	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	8	58.9	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	11	85.4	60.9
Literacy level	24	95.5	80.5
Educational level	22	62.7	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	20	60.9	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=1	100.0	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **Bahrain**

Nominal GDP (US\$ bn)	22.9
Population (m)	1.2
GDP per capita (US\$)	18,585.6



Average for all countries

1.2	
18,585.6	
2G)	
GOVERNMENT- TO-CITIZEN	
(G2C)	
<b>?</b> .\ \	
BUSINESS-TO-	
GOVERNMENT (B2G)	
(620)	
$\checkmark$	
GOVERNMENT-TO- BUSINESS (G2B)	
DUSINESS (UZD)	

	Rank	Score	Average
OVERALL SCORE	46	46.2	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=54	35.0	62.7
Income tax payments	=60	0.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=1	100.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=30	56.3	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	ts =1	100.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=53	37.5	73.3
Income tax payments	=60	0.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=56	12.5	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	35	44.0	49.5
Number of ATMs per 10,000 people	43	14.2	28.5
Number of POS terminals per 10,000 people	30	15.3	20.0
Diffusion of broadband	36	21.1	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	=19	51.2	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	35	54.9	60.9
Literacy level	43	80.6	80.5
Educational level	32	55.2	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	=43	8.4	38.8
Percentage of population with payment card(s)	=39	50.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

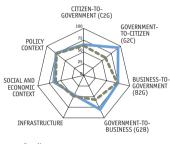
# Appendix I

# **Country Summaries**



#### Brazil

Nominal GDP (US\$ bn)	2,087.9
Population (m)	190.8
GDP per capita (US\$)	10,945.3



Brazil Average for all countries

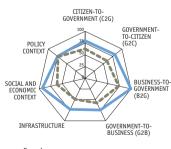
	Rank	Score	Average
OVERALL SCORE	28	71.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=28	65.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare bene		75.0	56.9
Government nealth benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=33	75.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=44	50.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=21	81.3	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=11	75.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	32	46.5	49.5
Number of ATMs per 10,000 people	=10	51.1	28.5
Number of POS terminals per 10,000 people	16	34.6	20.0
Diffusion of broadband	38	19.3	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	32	42.1	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=28	75.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	28	65.2	60.9
Literacy level	45	77.6	80.5
Educational level	35	52.7	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	32	31.2	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### Canada

Nominal GDP (US\$ bn)	1,577.0
Population (m)	34.0
GDP per capita (US\$)	46,334.1



Canada Average for all countries

	Rank	Score	Average
OVERALL SCORE	16	82.5	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=18	81.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefits	s =1	100.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=26	75.0	58.3
Income tax refunds	=32	75.0	62.5
VAT/sales tax refunds	=32	75.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=11	75.0	46.0
Dispuisement of tours	-11	, 5.0	+0.0

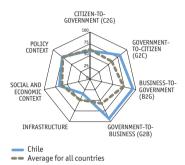
	Rank	Score	Average
INFRASTRUCTURE	8	73.3	49.5
Number of ATMs per 10,000 people	1	100.0	28.5
Number of POS terminals per 10,000 people	8	39.3	20.0
Diffusion of broadband	9	72.4	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	53	24.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	4	93.1	60.9
Literacy level	=9	97.8	80.5
Educational level	16	67.5	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=1	100.0	41.1
Proportion of consumer orders of goods via the Internet	15	72.9	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

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#### Chile

Nominal GDP (US\$ bn)	203.4
Population (m)	17.1
GDP per capita (US\$)	11,900.0



	Rank	Score	Average
OVERALL SCORE	26	72.2	62.5
CITIZEN TO COVERNMENT (CCC)	=32	60.0	62.7
CITIZEN-TO-GOVERNMENT (C2G)			
Income tax payments	=42	75.0	83.1
Social security contributions	=49	25.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=18	81.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare bene	fits =11	75.0	56.9
Government health benefits	=23	75.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=6	93.8	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	46	35.0	49.5
Number of ATMs per 10,000 people	23	26.9	28.5
Number of POS terminals per 10,000 people	37	7.5	20.0
Diffusion of broadband	=32	24.3	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	=28	45.9	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	27	66.7	60.9
Literacy level	23	96.7	80.5
Educational level	28	58.1	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	38	20.2	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### China

Nominal GDP (US\$ bn)	5,926.0
Population (m)	1,312.0
GDP per capita (US\$)	4,520.0



ı	Rank	Score	Average
OVERALL SCORE	37	55.3	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=50	40.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=35	50.0	59.5
Income tax refunds	=39	50.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benefits	=28	50.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=38	68.8	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=33	56.3	58.3
Income tax refunds	=32	75.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	38	39.3	49.5
Number of ATMs per 10,000 people	49	9.1	28.5
Number of POS terminals per 10,000 people	44	3.4	20.0
Diffusion of broadband	30	28.3	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	55	23.5	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologie	s =44	25.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	43	49.3	60.9
Literacy level	34	86.5	80.5
Educational level	52	34.8	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=53	25.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	25	47.4	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
DOLLYCL CONTENT	40	00.0	70.5
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

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#### Colombia

Nominal GDP (US\$ bn)	288.7
Population (m)	46.9
GDP per capita (US\$)	6,152.5



	Rank	Score	Average
OVERALL SCORE	41	48.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=36	55.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=52	31.3	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefit	ts =28	50.0	56.9
Government health benefits	=23	75.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=38	68.8	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=47	25.0	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	51	31.2	49.5
Number of ATMs per 10,000 people	=44	13.7	28.5
Number of POS terminals per 10,000 people	39	6.8	20.0
Diffusion of broadband	37	19.5	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	45	34.7	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	36	54.7	60.9
Literacy level	39	84.8	80.5
Educational level	39	50.3	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	46	7.4	38.8
Percentage of population with payment card(s)	=45	25.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### Costa Rica

Nominal GDP (US\$ bn)	35.8
Population (m)	4.6
GDP per capita (US\$)	7,704.4



	Rank	Score	Average
OVERALL SCORE	45	47.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=36	55.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	s =28	50.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=45	56.3	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=44	31.3	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=11	75.0	46.0

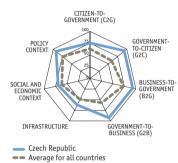
	Rank	Score	Average
INFRASTRUCTURE	44	35.9	49.5
Number of ATMs per 10,000 people	2	83.1	28.5
Number of POS terminals per 10,000 people	22	26.1	20.0
Diffusion of broadband	=45	8.6	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	57	19.8	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=60	0.0	53.6
SOCIAL AND ECONOMIC CONTEXT	45	48.6	60.9
Literacy level	29	91.1	80.5
Educational level	51	36.1	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=1	100.0	41.1
Proportion of consumer orders of goods via the Internet	41	10.3	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

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## **Czech Republic**

Nominal GDP (US\$ bn)	192.0
Population (m)	10.5
GDP per capita (US\$)	18,231.6



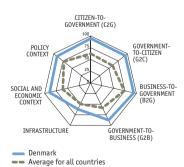
	Rank	Score	Average
OVERALL SCORE	14	82.8	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=19	75.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=1	100.0	60.9
COVERNMENT TO CITATEN (COC)		00.0	F0 F
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare bene	fits =11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=6	93.8	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=32	75.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	22	62.8	49.5
Number of ATMs per 10,000 people	38	18.3	28.5
Number of POS terminals per 10,000 people	31	13.4	20.0
Diffusion of broadband	24	43.4	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=16	52.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	23	68.9	60.9
Literacy level	=9	97.8	80.5
Educational level	20	65.0	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=53	25.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	31	32.5	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **Denmark**

Nominal GDP (US\$ bn)	309.9
Population (m)	5.6
GDP per capita (US\$)	55,800.0



			-
OVERALL SCORE	9	87.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=2	95.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefits	=1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
COVERNMENT TO DUCINECS (COD)	=12	87.5	58.3
GOVERNMENT-TO-BUSINESS (G2B)			
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=11	75.0	46.0

Rank Score Average

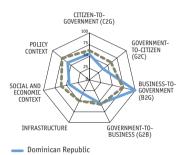
	Rank	Score	Average
INFRASTRUCTURE	25	61.8	49.5
Number of ATMs per 10,000 people	=27	24.2	28.5
Number of POS terminals per 10,000 people	21	28.9	20.0
Diffusion of broadband	2	85.5	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=10	56.0	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	8	89.9	60.9
Literacy level	=9	97.8	80.5
Educational level	5	74.5	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	6	86.7	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

A global index and benchmarking study



# **Dominican Republic**

Nominal GDP (US\$ bn)	52.1
Population (m)	9.6
GDP per capita (US\$)	5,420.0



- Average for all countries

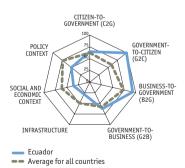
	Rank	Score	Average
OVERALL SCORE	38	54.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=36	55.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=47	37.5	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefit	s =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=33	56.3	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=48	25.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	50	32.1	49.5
Number of ATMs per 10,000 people	47	12.3	28.5
Number of POS terminals per 10,000 people	42	5.1	20.0
Diffusion of broadband	=45	8.6	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	50	30.8	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	50	43.5	60.9
Literacy level	49	73.6	80.5
Educational level	48	37.6	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	=51	4.9	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



#### **Ecuador**

Nominal GDP (US\$ bn)	58.0
Population (m)	14.3
GDP per capita (US\$)	4,050.0



	Rank	Score	Average
OVERALL SCORE	31	62.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=28	65.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=1	100.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefi	ts =1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSTNESS TO COMEDIMENT (BOS)	41	00.0	70.0
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=30	62.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=34	0.0	46.0
			1010

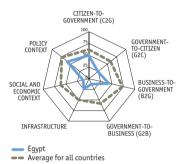
	Rank	Score	Average
INFRASTRUCTURE	53	28.2	49.5
Number of ATMs per 10,000 people	54	5.9	28.5
Number of POS terminals per 10,000 people	59	0.3	20.0
Diffusion of broadband	50	6.3	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	41	37.8	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologie	s =39	50.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	55	35.3	60.9
Literacy level	54	64.5	80.5
Educational level	34	52.8	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	57	0.6	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=53	50.0	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=54	50.0	83.1

# y Summaries A global index and benchmarking study



## **Egypt**

Nominal GDP (US\$ bn)	214.5
Population (m)	84.5
GDP per capita (US\$)	2,539.1



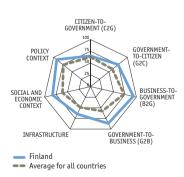
	Rank	Score	Average
OVERALL SCORE	56	32.2	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=41	50.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=49	25.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=53	25.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=54	25.0	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=49	25.0	62.9
Unemployment, workers' comp and welfare benefits	s =50	25.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=51	43.8	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=50	25.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=56	12.5	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	55	23.7	49.5
Number of ATMs per 10,000 people	59	2.3	28.5
Number of POS terminals per 10,000 people	56	0.6	20.0
Diffusion of broadband	51	4.8	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	48	31.9	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	62	12.2	60.9
Literacy level	58	24.4	80.5
Educational level	55	30.9	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=58	0.0	69.0
Provision of financial education	=59	0.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	=51	4.9	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **Finland**

Nominal GDP (US\$ bn)	239.2
Population (m)	5.3
GDP per capita (US\$)	44,734.6

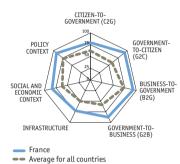


OVERALL SCORE         19         80.1         62.5           CITIZEN-TO-GOVERNMENT (C2G)         =28         65.0         62.7           Income tax payments         =1         100.0         83.1           Social security contributions         =1         100.0         69.8           Obtaining/paying for an ID card         =31         0.0         28.2           Automotive costs: tolls and fines         =53         25.0         71.4           Public transit payments         =1         100.0         60.9           GOVERNMENT-TO-CITIZEN (G2C)         =24         75.0         59.5           Income tax refunds         =34         75.0         63.7           Social security benefits         =1         100.0         62.9           Unemployment, workers' comp and welfare benefits =28         50.0         56.9           Government health benefits         =23         75.0         54.4           BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         78.6           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5 <th></th> <th>Rank</th> <th>Score</th> <th>Average</th>		Rank	Score	Average
Income tax payments	OVERALL SCORE	19	80.1	62.5
Income tax payments				
Social security contributions         =1         100.0         69.8           Obtaining/paying for an ID card         =31         0.0         28.2           Automotive costs: tolls and fines         =53         25.0         71.4           Public transit payments         =1         100.0         60.9           GOVERNMENT-TO-CITIZEN (G2C)         =24         75.0         59.5           Income tax refunds         =34         75.0         63.7           Social security benefits         =1         100.0         62.9           Unemployment, workers' comp and welfare benefits =28         50.0         56.9           Government health benefits         =23         75.0         54.4           BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         71.8           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         <	CITIZEN-TO-GOVERNMENT (C2G)	=28	65.0	62.7
Obtaining/paying for an ID card         =31         0.0         28.2           Automotive costs: tolls and fines         =53         25.0         71.4           Public transit payments         =1         100.0         60.9           GOVERNMENT-TO-CITIZEN (G2C)         =24         75.0         59.5           Income tax refunds         =34         75.0         63.7           Social security benefits         =1         100.0         62.9           Unemployment, workers' comp and welfare benefits         =28         50.0         56.9           Government health benefits         =23         75.0         54.4           BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         71.8           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0	Income tax payments	=1	100.0	83.1
Automotive costs: tolls and fines       =53       25.0       71.4         Public transit payments       =1       100.0       60.9         GOVERNMENT-TO-CITIZEN (G2C)       =24       75.0       59.5         Income tax refunds       =34       75.0       63.7         Social security benefits       =1       100.0       62.9         Unemployment, workers' comp and welfare benefits =28       50.0       56.9         Government health benefits       =23       75.0       54.4         BUSINESS-TO-GOVERNMENT (B2G)       =14       93.8       73.3         Income tax payments       =1       100.0       80.2         VAT/sales tax payments       =1       100.0       71.8         Social security and other contributions       =1       100.0       71.8         Company registration and payment of fees       =23       75.0       62.5         GOVERNMENT-TO-BUSINESS (G2B)       =12       87.5       58.3         Income tax refunds       =32       75.0       62.5         VAT/sales tax refunds       =1       100.0       61.3         Payments for goods and services       =1       100.0       63.3	Social security contributions	=1	100.0	69.8
Public transit payments         =1         100.0         60.9           GOVERNMENT-TO-CITIZEN (G2C)         =24         75.0         59.5           Income tax refunds         =34         75.0         63.7           Social security benefits         =1         100.0         62.9           Unemployment, workers' comp and welfare benefits =28         50.0         56.9           Government health benefits         =23         75.0         54.4           BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         71.8           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Obtaining/paying for an ID card	=31	0.0	28.2
GOVERNMENT-TO-CITIZEN (G2C)         =24         75.0         59.5           Income tax refunds         =34         75.0         63.7           Social security benefits         =1         100.0         62.9           Unemployment, workers' comp and welfare benefits         =28         50.0         56.9           Government health benefits         =23         75.0         54.4           BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         71.8           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Automotive costs: tolls and fines	=53	25.0	71.4
Income tax refunds	Public transit payments	=1	100.0	60.9
Income tax refunds				
Social security benefits         =1         100.0         62.9           Unemployment, workers' comp and welfare benefits         =28         50.0         56.9           Government health benefits         =23         75.0         54.4           BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         78.6           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	GOVERNMENT-TO-CITIZEN (G2C)	=24	75.0	59.5
Unemployment, workers' comp and welfare benefits = 28   50.0   56.9	Income tax refunds	=34	75.0	63.7
BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         78.6           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Social security benefits	=1	100.0	62.9
BUSINESS-TO-GOVERNMENT (B2G)         =14         93.8         73.3           Income tax payments         =1         100.0         80.2           VAT/sales tax payments         =1         100.0         78.6           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Unemployment, workers' comp and welfare bene	fits =28	50.0	56.9
Income tax payments	Government health benefits	=23	75.0	54.4
Income tax payments				
VAT/sales tax payments         =1         100.0         78.6           Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Social security and other contributions         =1         100.0         71.8           Company registration and payment of fees         =23         75.0         62.5           GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Income tax payments	=1	100.0	80.2
GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	VAT/sales tax payments	=1	100.0	78.6
GOVERNMENT-TO-BUSINESS (G2B)         =12         87.5         58.3           Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Social security and other contributions	=1	100.0	71.8
Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	Company registration and payment of fees	=23	75.0	62.5
Income tax refunds         =32         75.0         62.5           VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3				
VAT/sales tax refunds         =1         100.0         61.3           Payments for goods and services         =1         100.0         63.3	GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Payments for goods and services =1 100.0 63.3	Income tax refunds	=32	75.0	62.5
		=1	100.0	61.3
Disbursement of loans =11 75.0 46.0	Payments for goods and services	=1	100.0	63.3
	Disbursement of loans	=11	75.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	17	65.1	49.5
Number of ATMs per 10,000 people	40	17.4	28.5
Number of POS terminals per 10,000 people	51	1.0	20.0
Diffusion of broadband	4	79.8	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	3	72.3	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	s =1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	17	82.6	60.9
Literacy level	=1	100.0	80.5
Educational level	7	74.0	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	17	69.2	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

#### **France**

Nominal GDP (US\$ bn)	2,562.6
Population (m)	62.9
GDP per capita (US\$)	40,710.0

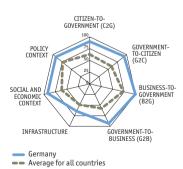


OVERALL SCORE	11	86.0	COF
			62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefi	ts =11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	10	72.2	49.5
Number of ATMs per 10,000 people	13	47.9	28.5
Number of POS terminals per 10,000 people	12	37.8	20.0
Diffusion of broadband	5	77.2	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=36	39.7	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	15	83.1	60.9
Literacy level	=9	97.8	80.5
Educational level	13	68.7	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	8	81.7	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

#### **Germany**

Nominal GDP (US\$ bn)	3,288.2
Population (m)	81.7
GDP per capita (US\$)	40,240.0



I	Rank	Score	Average
OVERALL SCORE	4	89.3	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=5	90.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefits	=11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
	=1	100.0	62.5
Company registration and payment of fees	=1	100.0	02.5
GOVERNMENT-TO-BUSINESS (G2B)	=6	93.8	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=11	75.0	46.0

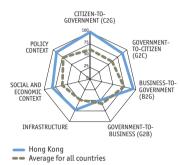
	Rank	Score	Average
INFRASTRUCTURE	18	64.5	49.5
Number of ATMs per 10,000 people	=10	51.1	28.5
Number of POS terminals per 10,000 people	32	12.9	20.0
Diffusion of broadband	8	72.8	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=13	54.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	6	91.7	60.9
Literacy level	=9	97.8	80.5
Educational level	14	67.8	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	7	84.3	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

Country Summaries



#### **Hong Kong**

Nominal GDP (US\$ bn)	224.5
Population (m)	7.1
GDP per capita (US\$)	31,660.0



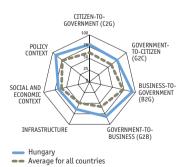
	Rank	Score	Average
OVERALL SCORE	15	82.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	1	100.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=1	100.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=14	87.5	59.5
Income tax refunds	=34	75.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefit	s =1	100.0	56.9
Government health benefits	=23	75.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=37	50.0	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	9	73.0	49.5
Number of ATMs per 10,000 people	39	17.8	28.5
Number of POS terminals per 10,000 people	9	38.8	20.0
Diffusion of broadband	12	68.9	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	9	58.4	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	16	82.7	60.9
Literacy level	36	85.4	80.5
Educational level	18	65.8	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	18	68.3	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### Hungary

Nominal GDP (US\$ bn)	130.4
Population (m)	10.0
GDP per capita (US\$)	13,023.9



	Rank	Score	Average
OVERALL SCORE	20	79.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=24	75.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	s =11	75.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=21	81.3	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=11	75.0	46.0

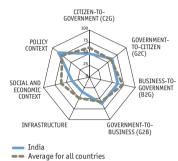
	Rank	Score	Average
INFRASTRUCTURE	19	64.3	49.5
Number of ATMs per 10,000 people	25	25.6	28.5
Number of POS terminals per 10,000 people	33	12.8	20.0
Diffusion of broadband	20	54.2	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	27	46.9	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	26	67.6	60.9
Literacy level	8	98.6	80.5
Educational level	24	62.3	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	37	22.5	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

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#### India

Nominal GDP (US\$ bn)	1,725.6
Population (m)	1,184.0
GDP per capita (US\$)	1,460.0



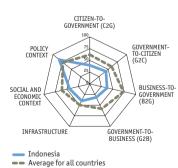
	Rank	Score	Average
OVERALL SCORE	36	56.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=41	50.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	29	62.5	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare bene	fits =28	50.0	56.9
Government health benefits	=1	100.0	54.4
DUCTNESS TO COVEDNMENT (D2C)	=43	62.5	73.3
BUSINESS-TO-GOVERNMENT (B2G)	=43	100.0	80.2
Income tax payments	=1		78.6
VAT/sales tax payments		50.0	
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=30	62.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	47	34.6	49.5
Number of ATMs per 10,000 people	=57	3.2	28.5
Number of POS terminals per 10,000 people	51	1.0	20.0
Diffusion of broadband	57	2.6	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	56	19.9	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	54	36.9	60.9
Literacy level	59	16.3	80.5
Educational level	59	25.8	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	19	65.5	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### Indonesia

Nominal GDP (US\$ bn)	706.5
Population (m)	243.0
GDP per capita (US\$)	2,907.8



	Rank	Score	Average
OVERALL SCORE	47	45.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=50	40.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benef	its =28	50.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=53	37.5	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=44	50.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=44	31.3	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=11	75.0	46.0

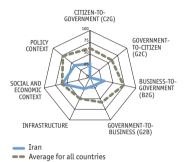
	Rank	Score	Average
INFRASTRUCTURE	37	39.6	49.5
Number of ATMs per 10,000 people	=52	6.4	28.5
Number of POS terminals per 10,000 people	48	1.8	20.0
Diffusion of broadband	58	1.9	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	49	31.3	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=28	75.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	49	44.3	60.9
Literacy level	42	82.4	80.5
Educational level	42	46.9	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=58	0.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	3	94.7	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

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#### **Iran**

Nominal GDP (US\$ bn)	418.3
Population (m)	75.1
GDP per capita (US\$)	5,570.0



	Rank	Score	Average
OVERALL SCORE	59	29.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=60	30.0	62.7
Income tax payments	=58	25.0	83.1
Social security contributions	=49	25.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=58	0.0	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefit	ts =56	0.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=56	31.3	73.3
Income tax payments	=57	25.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=52	18.8	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=43	25.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=42	0.0	46.0

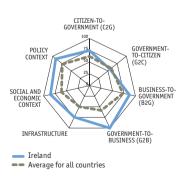
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	Rank	Score	Average
INFRASTRUCTURE	54	26.2	49.5
Number of ATMs per 10,000 people	=44	13.7	28.5
Number of POS terminals per 10,000 people	20	31.4	20.0
Diffusion of broadband	52	3.5	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	42	35.9	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=60	0.0	53.6
SOCIAL AND ECONOMIC CONTEXT	31	60.3	60.9
Literacy level	53	66.3	80.5
Educational level	43	43.4	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	45	7.8	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=57	41.7	73.5
Government commitment to e-payment security	=58	25.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=60	0.0	83.1



#### **Ireland**

Nominal GDP (US\$ bn)	207.1
Population (m)	4.2
GDP per capita (US\$)	49,660.0



	Rank	Score	Average
OVERALL SCORE	17	81.3	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=19	75.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=30	56.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefit		25.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=26	87.5	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=1	100.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=1	100.0	46.0

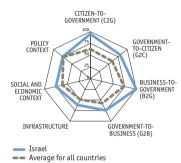
	Rank	Score	Average
INFRASTRUCTURE	7	74.1	49.5
Number of ATMs per 10,000 people	17	43.8	28.5
Number of POS terminals per 10,000 people	15	34.7	20.0
Diffusion of broadband	15	63.8	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=22	50.2	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	13	84.9	60.9
Literacy level	=9	97.8	80.5
Educational level	3	83.3	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	21	57.9	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

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#### **Israel**

Nominal GDP (US\$ bn)	217.8
Population (m)	7.6
GDP per capita (US\$)	28,568.8



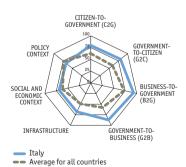
	Rank	Score	Average
OVERALL SCORE	18	80.5	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=2	95.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=18	81.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benef	fits =11	75.0	56.9
Government health benefits	=23	75.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=26	75.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	24	62.3	49.5
Number of ATMs per 10,000 people	14	47.5	28.5
Number of POS terminals per 10,000 people	24	21.9	20.0
Diffusion of broadband	21	53.5	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=22	50.2	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	21	75.1	60.9
Literacy level	27	93.5	80.5
Educational level	21	64.4	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	27	42.8	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **Italy**

Nominal GDP (US\$ bn)	2,054.6
Population (m)	60.1
GDP per capita (US\$)	33,930.0



	Rank	Score	Average
OVERALL SCORE	23	78.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=18	81.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	its =28	50.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	15	68.0	49.5
Number of ATMs per 10,000 people	16	44.7	28.5
Number of POS terminals per 10,000 people	18	32.2	20.0
Diffusion of broadband	19	54.8	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	5	62.2	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	25	68.7	60.9
Literacy level	22	97.5	80.5
Educational level	10	70.3	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	36	25.7	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=40	66.7	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1





## Japan

Nominal GDP (US\$ bn)	5,460.2
Population (m)	126.8
GDP per capita (US\$)	43,060.0



-- Average for all countries

	Rank	Score	Average
OVERALL SCORE	21	78.5	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=27	68.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benefit	ts =50	25.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=38	68.8	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
,			
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=11	75.0	46.0

		_	
	Rank		Average
INFRASTRUCTURE	12	70.6	49.5
Number of ATMs per 10,000 people	12	49.8	28.5
Number of POS terminals per 10,000 people	25	19.0	20.0
Diffusion of broadband	16	60.5	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	44	35.2	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and			
mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	18	82.0	60.9
Literacy level	=9	97.8	80.5
Educational level	25	61.4	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	23	53.8	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### Kazakhstan

Nominal GDP (US\$ bn)	141.5
Population (m)	16.2
GDP per capita (US\$)	8,730.0



Average for all countries

	Income tax payments
_	Social security contributions
5 2 0	Obtaining/paying for an ID card
2	Automotive costs: tolls and fine
0	Public transit payments
	GOVERNMENT-TO-CITIZEN (G2
	Income tax refunds
	Social security benefits
-	Unemployment, workers' comp
	Government health benefits
TO- NT	<b>BUSINESS-TO-GOVERNMENT (E</b>
	Income tax payments
	VAT/sales tax payments
	Social security and other contril
	Company registration and paym
	GOVERNMENT-TO-BUSINESS (C
	Income tax refunds
	VAT/sales tax refunds
	Payments for goods and services

	Rank	Score	Average
OVERALL SCORE	49	44.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=32	60.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=39	50.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	ts =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=45	56.3	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=48	50.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=41	37.5	58.3
Income tax refunds	=38	50.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=40	25.0	46.0

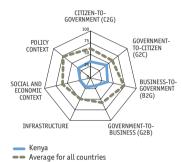
	Rank	Score	Average
INFRASTRUCTURE	56	22.3	49.5
Number of ATMs per 10,000 people	=29	23.7	28.5
Number of POS terminals per 10,000 people	46	2.6	20.0
Diffusion of broadband	41	13.7	34.5
Public-access terminals per capita	=58	25.0	76.2
Mobile subscriptions per 100 people	40	38.2	42.8
Level of development of stored value cards	=59	25.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	41	51.3	60.9
Literacy level	4	99.3	80.5
Educational level	26	61.1	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	=34	26.5	38.8
Percentage of population with payment card(s)	=39	50.0	64.9
POLICY CONTEXT	=57	41.7	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=60	0.0	83.1

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#### Kenya

Nominal GDP (US\$ bn)	30.9
Population (m)	40.5
GDP per capita (US\$)	763.0



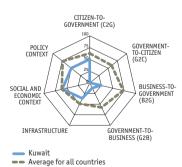
	Rank	Score	Average
OVERALL SCORE	58	30.3	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=54	35.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=58	0.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benefi	ts =50	25.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=53	37.5	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=54	25.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=52	18.8	58.3
Income tax refunds	=32	75.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	58	21.6	49.5
Number of ATMs per 10,000 people	56	3.7	28.5
Number of POS terminals per 10,000 people	56	0.6	20.0
Diffusion of broadband	=61	0.0	34.5
Public-access terminals per capita	=58	25.0	76.2
Mobile subscriptions per 100 people	59	18.7	42.8
Level of development of stored value cards	=59	25.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	57	22.3	60.9
Literacy level	50	70.8	80.5
Educational level	56	30.3	53.6
Internet/technology savviness	=60	0.0	66.5
Percentage of population using banks/other financial institutions	=57	0.0	60.5
Percentage of businesses using banks/other financial institutions	=58	0.0	69.0
Provision of financial education	=59	0.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	=59	0.0	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	61	33.3	73.5
Government commitment to e-payment security	=58	25.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=60	0.0	83.1
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#### **Kuwait**

Nominal GDP (US\$ bn)	124.3
Population (m)	3.6
GDP per capita (US\$)	34,730.0



	Kank	Jeore	Average
OVERALL SCORE	55	33.4	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=41	50.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=58	0.0	59.5
Income tax refunds	=36	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefit		0.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=58	25.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=56	12.5	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=42	0.0	46.0

Rank Score Average

	Rank	Score	Average
INFRASTRUCTURE	43	36.8	49.5
Number of ATMs per 10,000 people	=27	24.2	28.5
Number of POS terminals per 10,000 people	29	16.0	20.0
Diffusion of broadband	=53	3.3	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	21	50.7	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologie	s =44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	32	59.6	60.9
Literacy level	35	86.3	80.5
Educational level	45	41.8	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	=43	8.4	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=53	50.0	73.5
Government commitment to e-payment security	=58	25.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=54	50.0	83.1

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## Malaysia

Nominal GDP (US\$ bn)	237.8
Population (m)	28.3
GDP per capita (US\$)	8,417.6



	Rank	Score	Average
OVERALL SCORE	29	69.3	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=19	75.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=30	56.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benef	its =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=33	75.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=30	62.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

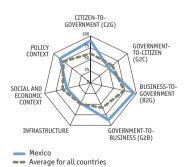
	Rank	Score	Average
INFRASTRUCTURE	20	63.2	49.5
Number of ATMs per 10,000 people	26	24.7	28.5
Number of POS terminals per 10,000 people	28	16.3	20.0
Diffusion of broadband	=32	24.3	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=33	40.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	22	69.7	60.9
Literacy level	41	83.0	80.5
Educational level	44	42.5	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	12	76.6	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1
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#### **Mexico**

61

Nominal GDP (US\$ bn)	1,034.3
Population (m)	112.5
GDP per capita (US\$)	9,196.3



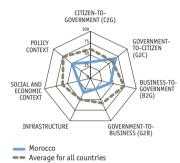
	Rank	Score	Average
OVERALL SCORE	27	72.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=5	90.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=1	100.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=35	50.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare bene	fits =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
COVERNMENT TO DUCINESS (COD)	40	07.5	FO 2
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	31	47.8	49.5
Number of ATMs per 10,000 people	34	20.5	28.5
Number of POS terminals per 10,000 people	35	9.1	20.0
Diffusion of broadband	29	28.5	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	53	24.6	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	s =28	75.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	40	52.0	60.9
Literacy level	38	85.3	80.5
Educational level	36	52.5	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	=51	4.9	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

# \*

#### Morocco

Nominal GDP (US\$ bn)	90.8
Population (m)	32.4
GDP per capita (US\$)	2,804.3



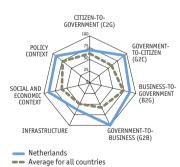
	Rank	Score	Average
OVERALL SCORE	52	40.2	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=54	35.0	62.7
Income tax payments	=58	25.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=27	68.8	59.5
Income tax refunds	=43	25.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare bene	efits =11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=51	43.8	73.3
Income tax payments	=57	25.0	80.2
VAT/sales tax payments	=54	25.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=48	25.0	62.5
COVERNMENT TO DISCUSES (C2D)	/7	25.0	58.3
GOVERNMENT-TO-BUSINESS (G2B)	=47		
Income tax refunds	=43	25.0	62.5
VAT/sales tax refunds	=43	25.0	61.3
Payments for goods and services	=48	25.0	63.3
Disbursement of loans	=40	25.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	48	33.1	49.5
Number of ATMs per 10,000 people	50	8.7	28.5
Number of POS terminals per 10,000 people	50	1.4	20.0
Diffusion of broadband	=53	3.3	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	52	26.3	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=28	75.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	56	25.9	60.9
Literacy level	61	1.3	80.5
Educational level	60	25.4	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	48	6.5	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=53	50.0	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=54	50.0	83.1



#### **Netherlands**

Nominal GDP (US\$ bn)	781.1
Population (m)	16.6
GDP per capita (US\$)	47,124.1



	Rank	Score	Average
OVERALL SCORE	12	85.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=24	70.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=6	93.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefi	ts =11	75.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=26	87.5	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=38	50.0	62.5
COUEDNMENT TO DUCTNIESS (COD)		400.0	50.0
GOVERNMENT-TO-BUSINESS (G2B)	=1	100.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	21	62.9	49.5
Number of ATMs per 10,000 people	22	29.2	28.5
Number of POS terminals per 10,000 people	13	36.1	20.0
Diffusion of broadband	3	83.3	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	=13	54.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	5 =1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	9	89.1	60.9
Literacy level	=9	97.8	80.5
Educational level	8	73.5	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	9	80.9	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### A global index and benchmarking study



#### **New Zealand**

Nominal GDP (US\$ bn)	140.7
Population (m)	4.4
GDP per capita (US\$)	32,070.0



	Rank	Score	Average
OVERALL SCORE	25	73.5	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=24	70.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=24	75.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	its =11	75.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=41	37.5	58.3
Income tax refunds	=38	50.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	26	58.3	49.5
Number of ATMs per 10,000 people	19	33.3	28.5
Number of POS terminals per 10,000 people	2	65.7	20.0
Diffusion of broadband	10	72.1	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	30	45.0	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	1	96.8	60.9
Literacy level	=9	97.8	80.5
Educational level	1	100.0	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=1	100.0	41.1
Proportion of consumer orders of goods via the Internet	14	73.8	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



#### Nigeria

Nominal GDP (US\$ bn)	196.3
Population (m)	152.2
GDP per capita (US\$)	1,290.0

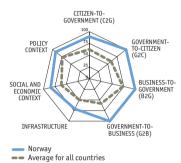


	Rank	Score	Average
OVERALL SCORE	62	24.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=54	35.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=49	25.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=54	25.0	59.5
Income tax refunds	=43	25.0	63.7
Social security benefits	=49	25.0	62.9
Unemployment, workers' comp and welfare benefi	ts =50	25.0	56.9
Government health benefits	=42	25.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=60	18.8	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=50	25.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=56	12.5	58.3
Income tax refunds	=43	25.0	62.5
VAT/sales tax refunds	=43	25.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	61	18.4	49.5
Number of ATMs per 10,000 people	=57	3.2	28.5
Number of POS terminals per 10,000 people	60	0.1	20.0
Diffusion of broadband	60	0.2	34.5
Public-access terminals per capita	=58	25.0	76.2
Mobile subscriptions per 100 people	58	18.8	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	60	16.9	60.9
Literacy level	60	11.9	80.5
Educational level	61	14.8	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=57	0.0	60.5
Percentage of businesses using banks/other financial institutions	=58	0.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	=59	0.0	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=57	41.7	73.5
Government commitment to e-payment security	=58	25.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

#### **Norway**

Nominal GDP (US\$ bn)	413.0
Population (m)	4.9
GDP per capita (US\$)	83,973.5



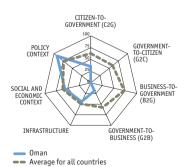
I	Rank	Score	Average
OVERALL SCORE	3	91.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=5	90.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=1	100.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefits	=1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
Company registration and payment of rees	-1	100.0	02.5
GOVERNMENT-TO-BUSINESS (G2B)	=1	100.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	11	70.9	49.5
Number of ATMs per 10,000 people	24	26.0	28.5
Number of POS terminals per 10,000 people	7	46.4	20.0
Diffusion of broadband	6	76.1	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	31	44.0	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	14	84.2	60.9
Literacy level	=1	100.0	80.5
Educational level	4	77.6	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	10	80.2	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **O**man

Nominal GDP (US\$ bn)	57.8
Population (m)	3.2
GDP per capita (US\$)	18,060.0



	Rank	Score	Average
OVERALL SCORE	54	35.2	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=54	35.0	62.7
Income tax payments	=60	0.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=58	0.0	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefi	ts =56	0.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	62	0.0	73.3
Income tax payments	=60	0.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=52	18.8	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=42	0.0	46.0

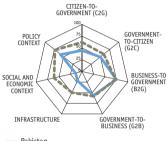
	Rank	Score	Average
INFRASTRUCTURE	34	44.6	49.5
Number of ATMs per 10,000 people	33	21.0	28.5
Number of POS terminals per 10,000 people	47	2.4	20.0
Diffusion of broadband	55	3.1	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	12	55.3	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologie	s =28	75.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	33	56.5	60.9
Literacy level	51	69.9	80.5
Educational level	54	31.4	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	47	7.0	38.8
Percentage of population with payment card(s)	=45	25.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

A global index and benchmarking study



#### **Pakistan**

Nominal GDP (US\$ bn)	176.8
Population (m)	185.5
GDP per capita (US\$)	956.6



_	Pakistan
	Average for all countries

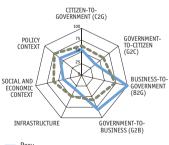
	Rank	Score	Average
OVERALL SCORE	47	45.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=47	45.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=55	0.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=35	50.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benef	its =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=33	75.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=33	56.3	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=48	25.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	58	21.6	49.5
Number of ATMs per 10,000 people	60	1.8	28.5
Number of POS terminals per 10,000 people	54	0.7	20.0
Diffusion of broadband	59	1.7	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	60	18.3	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	62	0.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	61	14.1	60.9
Literacy level	62	0.0	80.5
Educational level	62	0.0	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=57	0.0	60.5
Percentage of businesses using banks/other financial institutions	=58	0.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	55	1.7	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



#### Peru

Nominal GDP (US\$ bn)	153.8
Population (m)	30.0
GDP per capita (US\$)	5,140.0



_	Peru
	Average for all countries

Rank	Score	Average
34	57.7	62.5
=36	55.0	62.7
=1	100.0	83.1
=1	100.0	69.8
=31	0.0	28.2
=53	25.0	71.4
=36	50.0	60.9
=47	37.5	59.5
=1	100.0	63.7
=51	0.0	62.9
fits =28	50.0	56.9
=44	0.0	54.4
=1	100.0	73.3
=1	100.0	80.2
=1	100.0	78.6
=1	100.0	71.8
=1	100.0	62.5
=21	81 3	58.3
=1		62.5
=1		61.3
=34	50.0	63.3
=11	75.0	46.0
	34  =36 =1 =1 =31 =53 =36  =47 =1 =51 effts =28 =44 =1 =1 =1 =1 =1 =1 =34	34 57.7  =36 55.0  =1 100.0  =1 100.0  =31 0.0  =53 25.0  =36 50.0  =47 37.5  =1 100.0  =51 0.0  effits =28 50.0  =44 0.0  =1 100.0  =1 100.0  =1 100.0  =1 100.0  =1 100.0  =1 100.0  =1 100.0  =1 100.0  =34 50.0

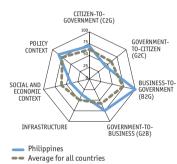
	Rank	Score	Average
INFRASTRUCTURE	49	32.2	49.5
Number of ATMs per 10,000 people	48	10.0	28.5
Number of POS terminals per 10,000 people	53	0.8	20.0
Diffusion of broadband	47	8.0	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	=38	38.7	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	52	39.6	60.9
Literacy level	47	76.6	80.5
Educational level	37	51.5	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	54	3.1	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

#### A global index and benchmarking study

# \*

# **Philippines**

Nominal GDP (US\$ bn)	199.6
Population (m)	99.9
GDP per capita (US\$)	2,000.0



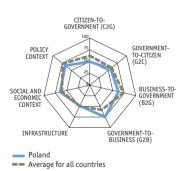
	Rank	Score	Average
OVERALL SCORE	30	64.2	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=24	70.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	ts =56	0.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=26	75.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Dishursement of loans	=42	0.0	46.0
DISDUISEIHEIL OF TOTALS	=42	0.0	40.0

	Rank	Score	Average
INFRASTRUCTURE	42	37.0	49.5
Number of ATMs per 10,000 people	=52	6.4	28.5
Number of POS terminals per 10,000 people	58	0.4	20.0
Diffusion of broadband	49	6.7	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	47	32.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	51	40.5	60.9
Literacy level	30	89.7	80.5
Educational level	49	37.1	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	29	37.6	38.8
Percentage of population with payment card(s)	=45	25.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **Poland**

Nominal GDP (US\$ bn)	469.2
Population (m)	38.2
GDP per capita (US\$)	12,280.0



	Rank	Score	Average
OVERALL SCORE	32	60.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=41	50.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=30	56.3	59.5
Income tax refunds	=34	75.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benefits	=28	50.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=43	62.5	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=48	50.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=26	75.0	58.3
Income tax refunds	=32	75.0	62.5
VAT/sales tax refunds	=32	75.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

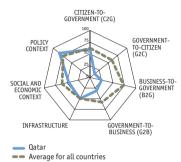
	Rank	Score	Average
INFRASTRUCTURE	30	48.9	49.5
Number of ATMs per 10,000 people	32	22.4	28.5
Number of POS terminals per 10,000 people	34	10.2	20.0
Diffusion of broadband	26	35.1	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	25	48.3	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	s =28	75.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	29	64.9	60.9
Literacy level	7	98.9	80.5
Educational level	23	62.5	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	26	47.2	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=40	66.7	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

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#### **Qatar**

Nominal GDP (US\$ bn)	128.1
Population (m)	1.7
GDP per capita (US\$)	74,760.0



	Rank	Score	Average
OVERALL SCORE	50	44.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=32	60.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=1	100.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=55	0.0	60.9
COVERNMENT TO CITETEN (COC)		40.5	F0 F
GOVERNMENT-TO-CITIZEN (G2C)	57	12.5	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare bene	fits =56	0.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=58	25.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=44	31.3	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	29	49.7	49.5
Number of ATMs per 10,000 people	37	19.6	28.5
Number of POS terminals per 10,000 people	36	7.6	20.0
Diffusion of broadband	35	22.6	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	2	72.5	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	47	46.4	60.9
Literacy level	32	88.1	80.5
Educational level	47	38.1	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=59	0.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	39	16.7	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



#### Russia

Nominal GDP (US\$ bn)	1,479.4
Population (m)	141.7
GDP per capita (US\$)	10,441.2



	Rank	Score	Average
OVERALL SCORE	40	50.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=41	50.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=53	25.0	71.4
Public transit payments	=19	75.0	60.9
COVERNMENT TO CITIZEN (COC)	=47	37.5	59.5
GOVERNMENT-TO-CITIZEN (G2C) Income tax refunds	=47	0.0	63.7
Social security benefits	=40	75.0	62.9
Unemployment, workers' comp and welfare benefi		75.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=49	50.0	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=48	50.0	78.6
Social security and other contributions	=44	50.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=33	56.3	58.3
Income tax refunds	=38	50.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=25	75.0	63.3
Disbursement of loans	=25	50.0	46.0

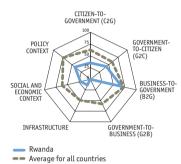
	Rank	Score	Average
INFRASTRUCTURE	33	45.4	49.5
Number of ATMs per 10,000 people	18	35.2	28.5
Number of POS terminals per 10,000 people	43	4.5	20.0
Diffusion of broadband	31	27.9	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	4	70.9	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=28	75.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	38	53.5	60.9
Literacy level	6	99.0	80.5
Educational level	33	53.6	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	33	29.1	38.8
Percentage of population with payment card(s)	=32	75.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

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#### Rwanda

Nominal GDP (US\$ bn)	5.5
Population (m)	10.6
GDP per capita (US\$)	516.0



	Rank	Score	Average
OVERALL SCORE	57	32.0	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=54	35.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=58	0.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	ts =28	50.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=38	68.8	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=48	50.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=60	0.0	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans			46.0
DISDUISEMENT OF TOAMS	=42	0.0	40.0

	Rank	Score	Average
INFRASTRUCTURE	62	13.6	49.5
Number of ATMs per 10,000 people	62	0.0	28.5
Number of POS terminals per 10,000 people	61	0.0	20.0
Diffusion of broadband	44	8.8	34.5
Public-access terminals per capita	=58	25.0	76.2
Mobile subscriptions per 100 people	62	0.0	42.8
Level of development of stored value cards	=59	25.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	58	21.2	60.9
Literacy level	57	34.0	80.5
Educational level	53	31.6	53.6
Internet/technology savviness	=60	0.0	66.5
Percentage of population using banks/other financial institutions	=57	0.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	=59	0.0	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=57	41.7	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=58	25.0	83.1



#### Saudi Arabia

Nominal GDP (US\$ bn)	447.8
Population (m)	27.1
GDP per capita (US\$)	16,500.0



_	Saudi Arabia
	Average for all countries

	Rank	Score	Average
OVERALL SCORE	51	43.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=32	60.0	62.7
Income tax payments	=60	0.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=52	31.3	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benef	its =50	25.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=60	18.8	73.3
Income tax payments	=60	0.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=47	25.0	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	36	42.6	49.5
	=35	20.1	28.5
Number of ATMs per 10,000 people			
Number of POS terminals per 10,000 people  Diffusion of broadband	41	5.4	20.0
	25	39.0	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	=19	51.2	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologie	s =28	75.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	43	49.3	60.9
Literacy level	52	68.8	80.5
Educational level	38	51.0	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=59	0.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	24	48.8	38.8
Percentage of population with payment card(s)	=39	50.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

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#### **Singapore**

Nominal GDP (US\$ bn)	222.7
Population (m)	5.1
GDP per capita (US\$)	43,864.3



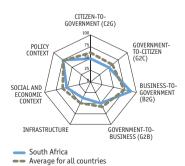
	Rank	Score	Average
OVERALL SCORE	7	88.3	62.5
CITIZEN TO COVERNMENT (COC)	-	00.0	60.7
CITIZEN-TO-GOVERNMENT (C2G)	=5	90.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=1	100.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefit	ts =1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=12	87.5	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	14	68.5	49.5
Number of ATMs per 10,000 people	31	22.8	28.5
Number of POS terminals per 10,000 people	18	32.2	20.0
Diffusion of broadband	18	57.2	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	6	60.8	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=28	75.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	19	80.5	60.9
Literacy level	32	88.1	80.5
Educational level	30	55.9	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	22	55.7	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=4	91.7	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



#### **South Africa**

Nominal GDP (US\$ bn)	364.2
Population (m)	49.1
GDP per capita (US\$)	7,420.0

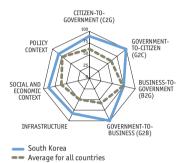


	Rank	Score	Average
OVERALL SCORE	35	57.4	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=41	50.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=35	50.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benefit	s =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=26	87.5	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=44	50.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=37	50.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	41	37.4	49.5
Number of ATMs per 10,000 people	=29	23.7	28.5
Number of POS terminals per 10,000 people	38	7.4	20.0
Diffusion of broadband	56	2.7	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	=33	40.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	39	52.1	60.9
Literacy level	48	74.6	80.5
Educational level	40	48.5	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=43	25.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=49	0.0	41.1
Proportion of consumer orders of goods via the Internet	16	71.1	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

#### **South Korea**

Nominal GDP (US\$ bn)	1,014.5
Population (m)	49.5
GDP per capita (US\$)	20,490.0



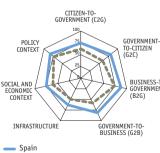
	Rank	Score	Average
OVERALL SCORE	5	88.6	62.5
CITIZEN TO COVERNMENT (COC)	=5	00.0	62.7
CITIZEN-TO-GOVERNMENT (C2G)	-	90.0	
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=1	100.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefits	=1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=33	75.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=1	100.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans		100.0	
DISDUISEMENT OF TOWNS	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	1	82.7	49.5
Number of ATMs per 10,000 people	4	73.1	28.5
Number of POS terminals per 10,000 people	1	100.0	20.0
Diffusion of broadband	7	75.0	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=38	38.7	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	10	88.9	60.9
Literacy level	1	100.0	80.5
Educational level	6	74.4	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	13	76.1	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to e-payment security  Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



#### **Spain**

Nominal GDP (US\$ bn)	1,409.9
Population (m)	45.9
GDP per capita (US\$)	30,700.0



or per capita (054)	30,700.0
POLICY CONTEXT 22 22 22 23 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	
<ul> <li>Average for all countr</li> </ul>	ies

	Rank	Score	Average
OVERALL SCORE	22	78.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=19	75.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=18	81.3	59.5
Income tax refunds	=34	75.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefi	ts =28	50.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=26	87.5	73.3
Income tax payments	=39	75.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=21	81.3	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=11	75.0	46.0

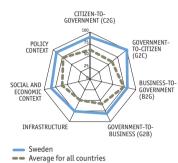
	Rank	Score	Average
INFRASTRUCTURE	22	62.8	49.5
Number of ATMs per 10,000 people	6	70.8	28.5
Number of POS terminals per 10,000 people	5	57.1	20.0
Diffusion of broadband	22	50.9	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	24	48.8	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	20	75.5	60.9
Literacy level	26	94.8	80.5
Educational level	9	72.1	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	28	37.8	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=19	83.3	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

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#### Sweden

Nominal GDP (US\$ bn)	458.9
Population (m)	9.4
GDP per capita (US\$)	48,753.8



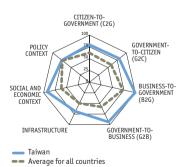
I	Rank	Score	Average
OVERALL SCORE	10	86.4	62.5
	_		
CITIZEN-TO-GOVERNMENT (C2G)	=5	90.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=1	100.0	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefits	=1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=31	81.3	73.3
Income tax payments	=47	50.0	80.2
	=47	100.0	78.6
VAT/sales tax payments			
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=21	81.3	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=34	50.0	63.3
Disbursement of loans	=11	75.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	6	75.7	49.5
Number of ATMs per 10,000 people	=41	16.9	28.5
Number of POS terminals per 10,000 people	17	32.7	20.0
Diffusion of broadband	1	100.0	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=10	56.0	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	12	85.0	60.9
Literacy level	=9	97.8	80.5
Educational level	19	65.5	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=44	50.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	11	76.7	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	,	91.7	73.5
	=4		
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=8	75.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1

# \*

#### **Taiwan**

Nominal GDP (US\$ bn)	429.8
Population (m)	23.2
GDP per capita (US\$)	18,550.0



	Rank	Score	Average
OVERALL SCORE	13	84.4	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=18	81.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	s =11	75.0	56.9
Government health benefits	=23	75.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=6	93.8	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=11	75.0	46.0

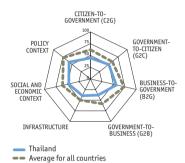
	Rank	Score	Average
INFRASTRUCTURE	13	68.7	49.5
Number of ATMs per 10,000 people	7	60.7	28.5
Number of POS terminals per 10,000 people	26	17.6	20.0
Diffusion of broadband	23	50.4	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=28	45.9	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	5	91.9	60.9
Literacy level	28	91.2	80.5
Educational level	11	69.3	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=1	100.0	41.1
Proportion of consumer orders of goods via the Internet	4	92.0	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

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## **Thailand**

Nominal GDP (US\$ bn)	318.9
Population (m)	67.6
GDP per capita (US\$)	4,720.0



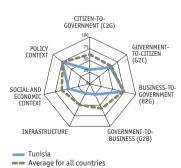
	Rank	Score	Average
OVERALL SCORE	43	47.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=47	45.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=35	50.0	59.5
Income tax refunds	=43	25.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefi	ts =11	75.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=45	56.3	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=54	0.0	71.8
Company registration and payment of fees	=48	25.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=41	37.5	58.3
Income tax refunds	=43	25.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=48	25.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	39	39.1	49.5
Number of ATMs per 10,000 people	=20	32.4	28.5
Number of POS terminals per 10,000 people	40	5.6	20.0
Diffusion of broadband	43	9.2	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=33	40.6	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=39	50.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	46	47.3	60.9
Literacy level	36	85.4	80.5
Educational level	46	40.0	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=51	25.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	56	0.7	38.8
Percentage of population with payment card(s)	=39	50.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



## **Tunisia**

Nominal GDP (US\$ bn)	44.0
Population (m)	10.4
GDP per capita (US\$)	4,240.0



	Rank	Score	Average
OVERALL SCORE	44	47.1	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=60	30.0	62.7
Income tax payments	=42	75.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=53	25.0	71.4
Public transit payments	=36	50.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=30	56.3	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benef	its =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=33	75.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=44	50.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=47	25.0	58.3
Income tax refunds	=38	50.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

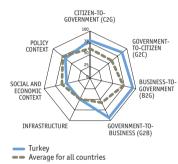
	Rank	Score	Average
INFRASTRUCTURE	57	22.0	49.5
Number of ATMs per 10,000 people	51	7.8	28.5
Number of POS terminals per 10,000 people	48	1.8	20.0
Diffusion of broadband	48	7.9	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	46	33.2	42.8
Level of development of stored value cards	=59	25.0	72.2
Level of development of 3G and other technologies	=39	50.0	68.1
Level of development of contactless and mobile payments	=60	0.0	53.6
SOCIAL AND ECONOMIC CONTEXT	48	46.2	60.9
Literacy level	55	49.5	80.5
Educational level	29	56.5	53.6
Internet/technology savviness	=24	75.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	42	9.9	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1





## Turkey

Nominal GDP (US\$ bn)	735.3
Population (m)	73.3
GDP per capita (US\$)	10,030.0



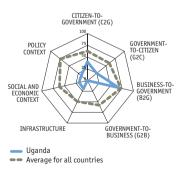
	Rank	Score	Average
OVERALL SCORE	24	74.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=12	80.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=24	25.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=14	87.5	59.5
Income tax refunds	=34	75.0	63.7
Social security benefits	=20	75.0	62.9
Unemployment, workers' comp and welfare benefit	its =1	100.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=14	93.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=6	93.8	58.3
Income tax refunds	=32	75.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans			46.0
DISDUISEIHERE OF LOARS	=1	100.0	40.0

	Rank	Score	Average
INFRASTRUCTURE	28	49.9	49.5
Number of ATMs per 10,000 people	=35	20.1	28.5
Number of POS terminals per 10,000 people	6	49.7	20.0
Diffusion of broadband	=32	24.3	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	51	29.7	42.8
Level of development of stored value cards	=23	75.0	72.2
Level of development of 3G and other technologies	=28	75.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	42	50.7	60.9
Literacy level	44	79.4	80.5
Educational level	50	36.7	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=53	25.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	40	15.3	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=40	66.7	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



## Uganda

Nominal GDP (US\$ bn)	17.0
Population (m)	33.8
GDP per capita (US\$)	503.7



	Rank	Score	Average
OVERALL SCORE	61	26.8	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=50	40.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=58	0.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=54	25.0	59.5
Income tax refunds	=39	50.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefi	ts =28	50.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=38	68.8	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=60	0.0	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

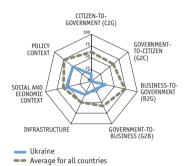
	Rank	Score	Average
INFRASTRUCTURE	60	19.2	49.5
Number of ATMs per 10,000 people	61	1.4	28.5
Number of POS terminals per 10,000 people	61	0.0	20.0
Diffusion of broadband	=61	0.0	34.5
Public-access terminals per capita	=58	25.0	76.2
Mobile subscriptions per 100 people	61	2.1	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	59	18.3	60.9
Literacy level	56	35.6	80.5
Educational level	57	29.0	53.6
Internet/technology savviness	=60	0.0	66.5
Percentage of population using banks/other financial institutions	=57	0.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=53	25.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	=59	0.0	38.8
Percentage of population with payment card(s)	=49	0.0	64.9
POLICY CONTEXT	62	16.7	73.5
Government commitment to e-payment security	62	0.0	74.2
Government commitment to integrating the informal economy	=55	25.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=58	25.0	83.1

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## Ukraine

Nominal GDP (US\$ bn)	137.9
Population (m)	45.8
GDP per capita (US\$)	3,010.0



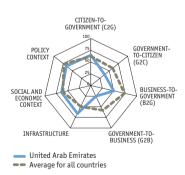
	Rank	Score	Average
OVERALL SCORE	60	28.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	62	15.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=58	0.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=58	0.0	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefi	its =56	0.0	56.9
Government health benefits	=44	0.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=56	31.3	73.3
Income tax payments	=57	25.0	80.2
VAT/sales tax payments	=41	75.0	78.6
Social security and other contributions	=50	25.0	71.8
Company registration and payment of fees	=50	0.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=52	18.8	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=48	25.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	51	31.2	49.5
Number of ATMs per 10,000 people	=20	32.4	28.5
Number of POS terminals per 10,000 people	45	2.9	20.0
Diffusion of broadband	40	16.2	34.5
Public-access terminals per capita	=46	50.0	76.2
Mobile subscriptions per 100 people	26	47.8	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=44	25.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	37	54.3	60.9
Literacy level	4	99.3	80.5
Educational level	27	58.2	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=30	75.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	50	5.9	38.8
Percentage of population with payment card(s)	=39	50.0	64.9
POLICY CONTEXT	=53	50.0	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	62	0.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



### **United Arab Emirates**

Nominal GDP (US\$ bn)	297.6
Population (m)	6.7
GDP per capita (US\$)	44,170.0



	Rank	Score	Average
OVERALL SCORE	39	53.4	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=28	65.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=53	0.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=47	37.5	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare bene	fits =28	50.0	56.9
Government health benefits	=30	50.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=49	50.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=56	0.0	78.6
Social security and other contributions	=50	25.0	71.8
Company registration and payment of fees	=23	75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=47	25.0	58.3
Income tax refunds	=47	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
		100.0	63.3
Payments for goods and services	=1		
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	16	65.9	49.5
Number of ATMs per 10,000 people	15	45.2	28.5
Number of POS terminals per 10,000 people	23	23.9	20.0
Diffusion of broadband	27	32.9	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	1	100.0	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologie	s =28	75.0	68.1
Level of development of contactless and mobile payments	=16	75.0	53.6
SOCIAL AND ECONOMIC CONTEXT	30	64.1	60.9
Literacy level	45	77.6	80.5
Educational level	41	47.9	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=23	75.0	60.5
Percentage of businesses using banks/other financial institutions	=24	75.0	69.0
Provision of financial education	=53	25.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	=34	26.5	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=40	66.7	73.5
Government commitment to e-payment security	=25	75.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1

## **United Kingdom**

Nominal GDP (US\$ bn)	2,250.1
Population (m)	62.3
GDP per capita (US\$)	36,139.0



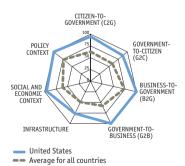
OVERALL SCORE	2	04.6	
OVERVIEW SCORE		91.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=5	90.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=1	100.0	28.2
Automotive costs: tolls and fines	=26	75.0	71.4
Public transit payments	=19	75.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=14	87.5	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefits	=28	50.0	56.9
Government health benefits	=1	100.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=6	93.8	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=11	75.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	4	76.8	49.5
Number of ATMs per 10,000 people	8	56.2	28.5
Number of POS terminals per 10,000 people	14	35.9	20.0
Diffusion of broadband	11	69.5	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	=16	52.6	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	3	93.5	60.9
Literacy level	=9	97.8	80.5
Educational level	12	68.8	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=7	75.0	41.1
Proportion of consumer orders of goods via the Internet	1	100.0	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=1	100.0	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



### **United States**

Nominal GDP (US\$ bn)	14,526.6
Population (m)	310.2
GDP per capita (US\$)	46,820.0



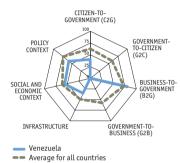
	Rank	Score	Average
OVERALL SCORE	1	93.6	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=2	95.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=1	100.0	69.8
Obtaining/paying for an ID card	=6	75.0	28.2
Automotive costs: tolls and fines	=1	100.0	71.4
Public transit payments	=1	100.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=14	87.5	59.5
Income tax refunds	=1	100.0	63.7
Social security benefits	=1	100.0	62.9
Unemployment, workers' comp and welfare benefit	its =11	75.0	56.9
Government health benefits	=23	75.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=1	100.0	73.3
Income tax payments	=1	100.0	80.2
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=1	100.0	71.8
Company registration and payment of fees	=1	100.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=1	100.0	58.3
Income tax refunds	=1	100.0	62.5
VAT/sales tax refunds	=1	100.0	61.3
Payments for goods and services	=1	100.0	63.3
Disbursement of loans	=1	100.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	5	76.6	49.5
Number of ATMs per 10,000 people	3	80.4	28.5
Number of POS terminals per 10,000 people	10	38.4	20.0
Diffusion of broadband	17	57.9	34.5
Public-access terminals per capita	=1	100.0	76.2
Mobile subscriptions per 100 people	43	35.7	42.8
Level of development of stored value cards	=1	100.0	72.2
Level of development of 3G and other technologies	=1	100.0	68.1
Level of development of contactless and mobile payments	=1	100.0	53.6
SOCIAL AND ECONOMIC CONTEXT	2	96.0	60.9
Literacy level	=9	97.8	80.5
Educational level	15	67.6	53.6
Internet/technology savviness	=1	100.0	66.5
Percentage of population using banks/other financial institutions	=1	100.0	60.5
Percentage of businesses using banks/other financial institutions	=1	100.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=1	100.0	41.1
Proportion of consumer orders of goods via the Internet	2	98.9	38.8
Percentage of population with payment card(s)	=1	100.0	64.9
POLICY CONTEXT	=1	100.0	73.5
Government commitment to e-payment security	=1	100.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=1	100.0	83.1



## **V**enezuela

Nominal GDP (US\$ bn)	242.4
Population (m)	28.6
GDP per capita (US\$)	8,466.4



	Rank	Score	Average
OVERALL SCORE	53	38.7	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=50	40.0	62.7
Income tax payments	=1	100.0	83.1
Social security contributions	=34	75.0	69.8
Obtaining/paying for an ID card	=31	0.0	28.2
Automotive costs: tolls and fines	=58	0.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=58	0.0	59.5
Income tax refunds	=46	0.0	63.7
Social security benefits	=51	0.0	62.9
Unemployment, workers' comp and welfare benefit	fits =56	0.0	56.9
Government health benefits	=44	0.0	54.4
DUCTNESS TO COVERNMENT (DOC)	=31	81.3	73.3
BUSINESS-TO-GOVERNMENT (B2G)		100.0	80.2
Income tax payments	=1		
VAT/sales tax payments	=1	100.0	78.6
Social security and other contributions	=34	75.0	71.8
Company registration and payment of fees	=38	50.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=60	0.0	58.3
Income tax refunds	=46	0.0	62.5
VAT/sales tax refunds	=46	0.0	61.3
Payments for goods and services	=54	0.0	63.3
Disbursement of loans	=42	0.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	45	35.4	49.5
Number of ATMs per 10,000 people	46	12.8	28.5
Number of POS terminals per 10,000 people	27	16.8	20.0
Diffusion of broadband	41	13.7	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	=36	39.7	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	=39	50.0	68.1
Level of development of contactless and mobile payments	=36	25.0	53.6
SOCIAL AND ECONOMIC CONTEXT	34	55.6	60.9
Literacy level	31	89.1	80.5
Educational level	31	55.5	53.6
Internet/technology savviness	=34	50.0	66.5
Percentage of population using banks/other financial institutions	=31	50.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=19	50.0	41.1
Proportion of consumer orders of goods via the Internet	49	6.1	38.8
Percentage of population with payment card(s)	=39	50.0	64.9
POLICY CONTEXT	=45	58.3	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=36	50.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



### **Vietnam**

Nominal GDP (US\$ bn)	103.6
Population (m)	87.8
GDP per capita (US\$)	1,180.0



	Rank	Score	Average
OVERALL SCORE	42	48.5	62.5
CITIZEN-TO-GOVERNMENT (C2G)	=47	45.0	62.7
Income tax payments	=50	50.0	83.1
Social security contributions	=41	50.0	69.8
Obtaining/paying for an ID card	=13	50.0	28.2
Automotive costs: tolls and fines	=44	50.0	71.4
Public transit payments	=45	25.0	60.9
GOVERNMENT-TO-CITIZEN (G2C)	=40	43.8	59.5
Income tax refunds	=39	50.0	63.7
Social security benefits	=40	50.0	62.9
Unemployment, workers' comp and welfare benefit	s =28	50.0	56.9
Government health benefits	=42	25.0	54.4
BUSINESS-TO-GOVERNMENT (B2G)	=45	56.3	73.3
Income tax payments	=47	50.0	80.2
VAT/sales tax payments	=48	50.0	78.6
Social security and other contributions	=44	50.0	71.8
Company registration and payment of fees =2		75.0	62.5
GOVERNMENT-TO-BUSINESS (G2B)	=39	43.8	58.3
Income tax refunds	=38	50.0	62.5
VAT/sales tax refunds	=35	50.0	61.3
Payments for goods and services	=48	25.0	63.3
Disbursement of loans	=25	50.0	46.0

	Rank	Score	Average
INFRASTRUCTURE	40	38.4	49.5
Number of ATMs per 10,000 people	55	5.5	28.5
Number of POS terminals per 10,000 people	54	0.7	20.0
Diffusion of broadband	39	16.3	34.5
Public-access terminals per capita	=26	75.0	76.2
Mobile subscriptions per 100 people	7	59.4	42.8
Level of development of stored value cards	=38	50.0	72.2
Level of development of 3G and other technologies	s =39	50.0	68.1
Level of development of contactless and mobile payments	=25	50.0	53.6
SOCIAL AND ECONOMIC CONTEXT	53	37.2	60.9
Literacy level	40	83.8	80.5
Educational level	58	26.0	53.6
Internet/technology savviness	=51	25.0	66.5
Percentage of population using banks/other financial institutions	=57	0.0	60.5
Percentage of businesses using banks/other financial institutions	=42	50.0	69.0
Provision of financial education	=1	100.0	73.4
Proportion of businesses placing orders via the Internet	=31	25.0	41.1
Proportion of consumer orders of goods via the Internet	58	0.3	38.8
Percentage of population with payment card(s)	=45	25.0	64.9
POLICY CONTEXT	=30	75.0	73.5
Government commitment to e-payment security	=43	50.0	74.2
Government commitment to integrating the informal economy	=1	100.0	63.3
Government commitment to the Financial Action Task Force (FATF)	=38	75.0	83.1



# Appendix II: Project scope, framework and methodology

## 1. Scoring criteria and categories

The Government E-Payments Adoption Ranking (GEAR) is a dynamic quantitative and qualitative benchmarking model of 37 indicators across seven categories. The model measures specific attributes of the electronic payments (e-payments) environment for governments across 62 countries. E-payment is defined as the exchange or transfer of funds over an electronic platform. Examples of electronic platforms include the Internet (accessed via multiple devices, including personal computers, mobile phones and tablets) and mobile-phone networks. Payments through these electronic platforms can be made by various means, including payment card, direct deposit, direct debit, electronic funds transfer and wire transfer.

The indicators and categories researched in this study improve upon the approach of the 2007 GEAR study, which analysed 31 indicators across six categories. For the most part the EIU utilised indicators from the 2007 study so that cross-time comparisons could be made. Seven new indicators were added to the 2011 GEAR study and one indicator (from the 2007 GEAR study) was removed. These modifications reflect the changing landscape for government e-payments overall and the desire to incorporate a wider range of analysis into the research. The research includes a mix of both qualitative and quantitative indicators.

The seven category scores are calculated from the weighted average of underlying indicators and scaled from 0-100, where 100=most favourable. The overall score is a weighted average of the category scores. The default model weight profile is set at neutral, where each category and indicator in the model is assigned an equal weight. The weighting for each indicator and category can be adjusted in the model in order to better gauge the impact of each indicator/category on the overall score.



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The seven categories and 37 indicators included in the 2011 GEAR study are shown below. New indicators are shown in blue.

#### **Categories and indicators**

#### 1 CITIZEN-TO-GOVERNMENT (C2G)

- 1.1 Income tax payments
- 1.2 Social security contributions
- 1.3 Obtaining/paying for an ID card
- 1.4 Automotive costs: tolls and fines
- 1.5 Public transit payments

#### 2 GOVERNMENT-TO-CITIZEN (G2C)

- 2.1 Income tax refunds
- 2.2 Social security benefits
- 2.3 Unemployment, workers' compensation and welfare benefits
- 2.4 Government health benefits

#### 3 BUSINESS-TO-GOVERNMENT (B2G)

- 3.1 Income tax payments
- 3.2 VAT/sales tax payments
- 3.3 Social security and other contributions
- 3.4 Company registration and payment of fees

#### 4 GOVERNMENT-TO-BUSINESS (G2B)

- 4.1 Income tax refunds
- 4.2 VAT/sales tax refunds
- 4.3 Payments for goods and services
- 4.4 Disbursement of loans

#### 5 INFRASTRUCTURE

- 5.1 Number of ATMs per 10,000 people
- 5.2 Number of POS terminals per 10,000 people
- 5.3 Diffusion of broadband
- 5.4 Public-access terminals per capita
- 5.5 Mobile subscriptions per 100 people
- 5.6 Level of development of stored value cards
- 5.7 Level of development of 3G and other technologies
- 5.8 Level of development of contactless and mobile payments

#### **6 SOCIAL AND ECONOMIC CONTEXT**

- 6.1 Literacy level
- 6.2 Educational level
- 6.3 Internet/technology savviness
- 6.4 Percentage of population using banks/other financial institutions
- 6.5 Percentage of businesses using banks/other financial institutions
- 6.6 Provision of financial education
- 6.7 Proportion of businesses placing orders via the Internet
- 6.8 Proportion of consumer orders of goods via the Internet
- 6.9 Percentage of population with payment card(s)

#### 7 POLICY CONTEXT

- 7.1 Government commitment to e-payment security
- 7.2 Government commitment to integrating the informal economy
- 7.3 Government commitment to the Financial Action Task Force (FATF)



The countries included in the 2011 GEAR study are listed below. The countries delineated in blue are those that were not included in the 2007 GEAR study.

#### Countries

Argentina
Australia
Austria
Bahrain
Brazil
Canada
Chile
China
Colombia
Costa Rica
Czech Republic
Denmark
Dominican Republic
Ecuador
Egypt
Finland
France
Germany
Hong Kong
Hungary
India

Indonesia
Iran
Ireland
Israel
Italy
Japan
Kazakhstan
Kenya
Kuwait
Malaysia
Mexico
Morocco
Netherlands
New Zealand
Nigeria
Norway
Oman
Pakistan
Peru
Philippines
Poland

Onton
Qatar
Russia
Rwanda
Saudi Arabia
Singapore
South Africa
South Korea
Spain
Sweden
Taiwan
Thailand
Tunisia
Turkey
Uganda
Ukraine
United Arab Emirates
United Kingdom
United States
Venezuela
Vietnam

## 2. Methodology

#### a. Data modelling

Data were collected across 37 indicators for each country. The research includes qualitative indicators, also referred to as ordinal variables, that are measured on a 0 to 4 scale, where 4=most favourable conditions, and are normalised on a scale of 0-100. The research also includes quantitative indicators, which are measured by a number and normalised on a scale of 0-100. Each indicator is constructed such that a higher value associates with a more favourable e-payments environment. For example, for the public transit payments indicator, a country in which transportation schemes enable transit costs to be fully and easily paid electronically is assigned a level of 4, whereas a country with no electronic payment system in place is assigned 0.

The scoring scheme for each component of the 2011 GEAR study is listed below:

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### Scoring scheme

1	CITIZEN-TO-GOVERNMENT (C2G)	Rating 0-100 (100=best)
1.1	Income tax payments	Rating 0-4 (4=best)
1.2	Social security contributions	Rating 0-4 (4=best)
1.3	Obtaining/paying for an ID card	Rating 0-4 (4=best)
1.4	Automotive costs: tolls and fines	Rating 0-4 (4=best)
1.5	Public transit payments	Rating 0-4 (4=best)
2	GOVERNMENT-TO-CITIZEN (G2C)	Rating 0-100 (100=best)
2.1	Income tax refunds	Rating 0-4 (4=best)
2.2	Social security benefits	Rating 0-4 (4=best)
2.3	Unemployment, workers' comp and welfare benefits	Rating 0-4 (4=best)
2.4	Government health benefits	Rating 0-4 (4=best)
3	BUSINESS-TO-GOVERNMENT (B2G)	Rating 0-100 (100=best)
3.1	Income tax payments	Rating 0-4 (4=best)
3.2	VAT/sales tax payments	Rating 0-4 (4=best)
3.3	Social security and other contributions	Rating 0-4 (4=best)
3.4	Company registration and payment of fees	Rating 0-4 (4=best)
4	GOVERNMENT-TO-BUSINESS (G2B)	Rating 0-100 (100=best)
4.1	Income tax refunds	Rating 0-4 (4=best)
4.2	VAT/sales tax refunds	Rating 0-4 (4=best)
4.3	Payments for goods and services	Rating 0-4 (4=best)
4.4	Disbursement of loans	Rating 0-4 (4=best)
5	INFRASTRUCTURE	Rating 0-100 (100=best)
5.1	Number of ATMs per 10,000 people	per 10,000 people
5.2	Number of POS terminals per 10,000 people	per 10,000 people
5.3	Diffusion of broadband	per 100 people
5.4	Public-access terminals per capita	Rating 0-4 (4=best)
5.5	Mobile subscriptions per 100 people	per 100 people
5.6	Level of development of stored value cards	Rating 0-4 (4=best)
5.7	Level of development of 3G and other technologies	Rating 0-4 (4=best)
5.8	Level of development of contactless and mobile payments	Rating 0-4 (4=best)
6	SOCIAL AND ECONOMIC CONTEXT	Rating 0-100 (100=best)
6.1	Literacy level	%
6.2	Educational level	Years
6.3	Internet/technology savviness	Rating 0-4 (4=best)
6.4	Percentage of population using banks/other financial institutions	Rating 0-4 (4=best)
6.5	Percentage of businesses using banks/other financial institutions  Provision of financial education	Rating 0-4 (4=best)
6.6	Proportion of husinesses placing orders via the Internet	Rating 0-4 (4=best)
6.8	Proportion of businesses placing orders via the Internet  Proportion of consumer orders of goods via the Internet	Rating 0-4 (4=best) %
6.9	Percentage of population with payment card(s)	Rating 0-4 (4=best)
	POLICY CONTEXT	
7		Rating 0-100 (100=best)
7.1	Government commitment to e-payment security	Rating 0-4 (4=best)
7.2 7.3	Government commitment to integrating the informal economy Government commitment to the Financial Action Task Force (FATF)	Rating 0-4 (4=best) Rating 0-4 (4=best)
		Naumu 0-4 (4=085L)



#### b. Calculating the index

#### **Normalisation**

#### **Oualitative indicators**

Qualitative indicators are measured on a 0 to 4 scale, where 4=most favourable conditions. In order to facilitate comparison across indicators, qualitative scores are normalised using the following formula:

$${x*1/[Max(x) - Min(x)]}*100$$

where Min(x) and Max(x) are, respectively, the lowest and highest values in the 62 economies for any given indicator.

An example of normalisation of a qualitative indicator:

Using the following example dataset (which contains fewer countries than the actual dataset for simplification):

	Data	Normalised score calculation		Normalised score/100
Argentina	4	[4*1/(4-0)]*100=	4*25=	100
Australia	2	[2*1/(4-0)]*100=	2*25=	50
Austria	3	[3*1/(4-0)]*100=	3*25=	75
Bahrain	0	[0*1/(4-0)]*100=	0*25=	0

#### **Quantitative indicators**

Quantitative indicators are normalised using the following formula which calculates a country score based on the minimum value (which scores 0) and the maximum value (which scores 100) for the indicator across all countries:

$$100*\{[x - Min(x)]/[Max(x) - Min(x)]\}$$

where Min(x) and Max(x) are, respectively, the lowest and highest values in the 62 economies for any given indicator. The value is thereby normalised to a 0-100 score, enabling direct comparison with other indicators.



An example of normalisation of a quantitative indicator:

Using the following example dataset (which contains fewer countries than the actual dataset for simplification):

	Data	
Argentina	248.0	
Australia	404.0	
Austria	417.4	= Max(x) = Maximum value
Bahrain	99.7	= Min(x) = Minimum value
Range	= [Max(x)-Min(x)] = 417.4 - 99.7 = 317.7	

	Data	Normalised score calculation	Normalised score/100
Argentina	248.0	=100 * [(248.0 - 99.7)/317.7]=	46.7
Australia	404.0	=100 * [(404.0 - 99.7)/317.7]=	95.8
Austria	417.0	= 100 * [(417.4 - 99.7)/317.7]=	100.0
Bahrain	99.7	= 100 * [(99.7 - 99.7)/317.7]=	0.0

The country with the lowest data value (Bahrain), scores 0 and the country with the highest data value (Austria) scores 100. Scores for other countries are distributed across a scale from 0-100 in the same proportion that their original data points are distributed across the scale from Min(x) to Max(x).

#### c. Model weights

The weights assigned to each category and indicator can be changed to reflect different assumptions about their relative importance. The default weight is set to the neutral weights which assumes equal importance of all categories, and evenly distributes weights.

The default weight profile in the 2011 GEAR study currently assigns the following weights to categories and indicators:



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#### Category and indicator weights

		CATEGORY WEIGHT	INDICATOR WEIGHT
1	CITIZEN-TO-GOVERNMENT (C2G)	14.3%	
1.1	Income tax payments		20.0%
1.2	Social security contributions		20.0%
3	Obtaining/paying for an ID card		20.0%
.4	Automotive costs: tolls and fines		20.0%
.5	Public transit payments		20.0%
2	GOVERNMENT-TO-CITIZEN (G2C)	14.3%	
.1	Income tax refunds		25.0%
.2	Social security benefits		25.0%
.3	Unemployment, workers' comp and welfare benefits		25.0%
.4	Government health benefits		25.0%
3	BUSINESS-TO-GOVERNMENT (B2G)	14.3%	
.1	Income tax payments		25.0%
.2	VAT/sales tax payments		25.0%
.3	Social security and other contributions		25.0%
.4	Company registration and payment of fees		25.0%
4	GOVERNMENT-TO-BUSINESS (G2B)	14.3%	
.1	Income tax refunds		25.0%
.2	VAT/sales tax refunds		25.0%
.3	Payments for goods and services		25.0%
.4	Disbursement of loans		25.0%
5	INFRASTRUCTURE	14.3%	
.1	Number of ATMs per 10,000 people		12.5%
.2	Number of POS terminals per 10,000 people		12.5%
.3	Diffusion of broadband		12.5%
.4	Public-access terminals per capita		12.5%
.5	Mobile subscriptions per 100 people		12.5%
.6	Level of development of stored value cards		12.5%
.7	Level of development of 3G and other technologies		12.5%
.8	Level of development of contactless and mobile payments		12.5%
6	SOCIAL AND ECONOMIC CONTEXT	14.3%	
.1	Literacy level		11.1%
.2	Educational level		11.1%
.3	Internet/technology savviness		11.1%
.4	Percentage of population using banks/other financial institutions		11.1%
.5	Percentage of businesses using banks/other financial institutions		11.1%
.6	Provision of financial education		11.1%
.7	Proportion of businesses placing orders via the Internet		11.1%
.8	Proportion of consumer orders of goods via the Internet		11.1%
.9	Percentage of population with payment card(s)		11.1%
7	POLICY CONTEXT	14.3%	
.1	Government commitment to e-payment security		33.3%
.2	Government commitment to integrating the informal economy		33.3%
.3	Government commitment to the Financial Action Task Force (FATF)		33.3%



Each category score is the weighted average of all underlying indicator scores, as determined by the weighting profile:

Category score =  $\Sigma$  weighted individual indicators,

which include both quantitative and qualitative normalised indicators.

An example of calculating the category score:

		Normalised score (0-100)	Weight (%)	Weighted score	
1.1	Income tax payments	100	40.0%	40% of 100 =	40.0
1.2	Social security contributions	100	15.0%	15% of 100 =	15.0
1.3	Obtaining/paying for an ID card	0	15.0%	15% of 0 =	0.0
1.4	Automotive costs: tolls and fines	75	15.0%	15% of 75 =	11.3
1.5	Public transit payments	0	15.0%	15% of 0 =	0.0
1	CITIZEN-TO-GOVERNMENT (C2G)		= (40 + 1	15 + 0 + 11.3 + 0) =	66.3

In the example above, the weighted score for each indicator is calculated as the normalised score multiplied by the weight percentage. The weighted scores are added together to create a weighted average score for the category.

In the example above, income tax payments has a higher weighting than the other indicators. This means the score for income tax payments will have a greater influence on the category score than the other indicators.

The overall score for each country is the weighted sum of the category scores, as determined by the weighting profile:

Overall score =  $\Sigma$  weighted category scores.

An example of calculating the overall score:

		Normalised score (0-100)	Weight (%)	Weighted score	
1	CITIZEN-TO-GOVERNMENT (C2G)	55.0	14.3%	14.3% of 55.0 =	7.9
2	GOVERNMENT-TO-CITIZEN (G2C)	37.5	14.3%	14.3% of 37.5 =	5.4
3	BUSINESS-TO-GOVERNMENT (B2G)	87.5	14.3%	14.3% of 87.5 =	12.5
4	GOVERNMENT-TO-BUSINESS (G2B)	43.8	14.3%	14.3% of 43.8 =	6.3
5	INFRASTRUCTURE	57.9	14.3%	14.3% of 57.9 =	8.3
6	SOCIAL AND ECONOMIC CONTEXT	68.8	14.3%	14.3% of 68.8 =	9.8
7	POLICY CONTEXT	66.7	14.3%	14.3% of 66.7 =	9.5
	OVERALL SCORE	= (7.9 +	5.4 + 12.5 + 6.3	+ 8.3 + 9.8 + 9.5) =	59.6



In the example above, the weighted score for each category is calculated as the normalised score multiplied by the weight percentage. The weighted scores are added together to create a weighted average overall score.

#### d. Dependent variables and model correlations

Correlating the indicators and categories in the 2011 GEAR study to other "output" (dependent) variables reveals some potentially interesting relationships. Correlation is a measure of the degree of linear relationship between two variables. A higher correlation reflects a stronger relationship between variables. A positive or negative correlation greater than 0.60 indicates a significant relationship (where 1.0=strongest correlation). To evaluate the relationship, the slope of the line that best fits through the data points, as well as the degree of scatter from that same line, is evaluated. The more dispersed the data points, the lower the correlation. The closer all of the data points are to the line, the higher the degree of correlation.

$$\rho x, y = \frac{E(XY) - E(X)E(Y)}{\sqrt{E(X^2) - (E(X))^2} \sqrt{E(Y^2) - (E(Y))^2}}$$

Where,

E(XY) is the average of the product of all corresponding X and Y values

E(X) is the average of X values

E(Y) is the average of Y values

and

The denominator is the product of the standard deviations of X and Y (standard deviation is a measure of variability of an indicator).

The section below discusses the dependent variables included in the analysis and the correlation between these variables and the overall score for countries in the 2011 GEAR study.

#### i. E-Participation Index:

The E-Participation Index is a complement to the UN E-Government Development Index. The E-Participation Index assesses the quality and usefulness of information and services provided by a country for the purpose of engaging its citizens in public policy making through the use of e-government programmes. It is measured on a scale of 0-1 (where a score of 1 reflects government inclusion of citizens in their decision-making process, government provision of information knowledge, and government consultation with citizens to obtain feedback).

The overall score in the 2011 GEAR study has a relatively strong positive correlation (0.72) with the E-Participation Index, implying that an increase in the overall score can significantly predict an increase in the score for the E-Participation Index. A relatively high correlation between the overall score and the E-Participation Index score implies that as a government improves its score in the GEAR study, its E-Participation Index score will also improve. Correlation does not prove causation: one variable does not cause a change in the other.



#### ii. Government Online Service Index:

The Government Online Service Index is one of the three components of the UN E-Government Development Index, which is a widely recognised measure of public sector capacity to provide electronic and mobile services. The Government Online Service Index measures four online service development phases: stage 1—emerging information services, stage 2—enhanced information services, stage 3—transactional services, and stage 4—connected services. The Index is measured on a scale of 0-1 (where a score of 1 reflects the best delivery of online services by the government).

The overall score in the 2011 GEAR study has a relatively strong positive correlation (0.72) with the Government Online Service Index, implying that an increase in the overall score can significantly predict an increase in the Government Online Service Index score. In other words, this relationship implies that as a government improves its score in the GEAR study, its Government Online Service Index score will also improve. This is a significant result, pointing to the interrelationship between the provision of key public services online (central to the GEAR study) and the provision of services for citizens to engage in decisions related to public policy (as measured in the Government Online Service Index).

#### iii. GDP per capita:

The overall score in the 2011 GEAR study has a moderately strong positive correlation of 0.64 with GDP per capita.

## 3. Notes on the comparison between 2007 and 2011

Technological developments have abounded worldwide over the past four years, prompting a change in standards for evaluating countries. It should be noted that because of a change in the number of countries in the 2011 study, the normalised scores and averages utilised in the cross-time comparison are different from the normalised scores and averages achieved by countries within each study individually. This section provides greater detail on how countries were compared and the methodology used to facilitate the comparison between the 2007 and 2011 studies.

To ensure an accurate comparison between 2007 and 2011, the analysis considers only the 43 countries researched in both 2007 and 2011. The following 19 countries were added to the 2011 GEAR study and were not included in the 2007 GEAR study:

Austria	Israel	Qatar
Bahrain	Kenya	Rwanda
Chile	Kuwait	Tunisia
Denmark	New Zealand	Uganda
Dominican Republic	Norway	Vietnam
Ecuador	Oman	
Finland	Poru	



#### **New indicators**

These seven indicators were added to the 2011 study, and therefore are not included in the comparison:

- 1.5 Public transit payments
- 5.8 Contactless and mobile payments
- 6.6 Proportion of businesses placing orders via the Internet
- 6.7 Proportion of consumer orders of goods via the Internet
- 6.8 Households with payment card(s)
- 6.9 Financial education
- 7.3 Government commitment to the Financial Action Task Force (FATF)

#### Indicators that were removed from the study

The following indicator was removed from the 2011 study, and therefore is not included in the comparison:

• Diffusion of narrowband/dial-up

The exclusion of this indicator from the 2007/2011 comparison resulted in a change to the 2007 normalised scores, and associated ranks, for countries in the comparison. Therefore, the normalised scores and ranks in the original 2007 model will not match the normalised scores and ranks in the 2007 study used for the comparison with the 2011 study.

#### New scoring methodology:

The following indicators exist in both the 2007 and 2011 studies, but are quantitative in the 2011 model, whereas they were qualitative in 2007. Qualitative scores have been inferred for 2011 based on the quantitative data. The subsequent qualitative scores are used for the comparison with 2007.

- Diffusion of broadband (1-5 rating in 2007; these bands were utilised to convert the 2011 quantitative indicator data, so that it is comparable).
- Mobile subscriptions per 100 people (1-5 rating in 2007; these bands were utilised to convert the 2011 quantitative indicator data, so that it is comparable).

#### Revised methodology for measuring indicators:

The methodology for scoring the following indicator changed between 2007 and 2011:

• Government commitment to e-payment security

This indicator looks at government commitment to electronic payment security. Assessment is based on the extent of e-commerce laws, whether e-commerce laws have been translated into the national regulatory regime, and whether regulations are actively enforced. By contrast, in 2007 this indicator looked at government commitment to electronic payments, with the emphasis placed on what governments were doing in order to encourage consumers and businesses to make electronic payments. The significant difference in the scoring methodology for this indicator should be noted and taken into consideration when making a 2007/2011 comparison.

Despite a significant change in the definition and evaluation criteria of this indicator, it was nevertheless included in the comparison analysis. This inclusion reflects the assumption that along with the



technological developments that have abounded worldwide over the past four years, governments have also moved from not only promoting the provision and adoption of electronic services, but also endorsing the security of these processes.

#### Interpreting changes in score for quantitative indicators:

The scores for the following quantitative indicators are normalised to create a score from 0-100 based on the range of data across all countries. This means that instead of comparing absolute changes to figures across time, the difference in scores among countries reflects the relative performance of a country (ie how it fared against other countries in a given year for a given indicator). Therefore, it is possible, for example, for a country to have more POS terminals in 2011 compared with 2007 but receive a lower normalised score (reflecting the fact that there are fewer POS terminals relative to other countries in a given year). For these indicators, change in rank rather than score is likely the most useful comparison metric:

- 5.1 Number of ATMs per 10,000 people
- 5.2 Number of POS terminals per 10,000 people
- 6.1 Literacy level
- 6.2 Educational level



**Appendix II**Project scope, framework and methodology

## 4. Sources and definitions of selected indicators

i Qualitative indicator—A qualitative variable is also called an ordinal variable. Performance along an indicator was evaluated based on informed assessment. It was measured on a 0 to 4 scale, where 4=most favourable conditions. In order to facilitate comparison, qualitative scores were normalised and translated to a 0-100 scale.

**ii Quantitative indicator**—A quantitative variable is a variable that can be measured by a number. In order to facilitate comparison, quantitative indicators were normalised and statistical figures were translated to a score on a 0-100 scale.

## 1) CITIZEN-TO-GOVERNMENT (C2G)

This category captures the extent to which citizens can complete various transactions electronically. These transactions are: income tax payments, social security contributions, obtaining/paying for an ID card, automotive costs and public transit payments.

Indicator	Source	Data Year Range	Indicator definitions and construction
1.1 <sup>i</sup> Income tax payments	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2009-2011	This indicator looks at the process of paying income taxes by individuals, including whether income taxes can fully and easily be calculated and filed electronically.  Countries were evaluated using the following scoring criteria: 4= Income taxes can fully and easily be calculated and filed electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists  In some cases, the payment aspect of the process was specifically considered (where applicable). This indicator assesses national (or federal) income taxes. On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. Countries that do not have an income tax are scored using a proxy tax. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
1.2 <sup>i</sup> Social security contributions	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2010-2011	This indicator looks at the process of making social security contributions by individuals, including whether contributions can fully and easily be calculated and filed electronically.  Countries were evaluated using the following scoring criteria: 4= Contributions can fully and easily be calculated and filed electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists  In some cases, the payment aspect of the process was specifically considered (where applicable). This indicator assesses national (or federal) social security contributions. On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.



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Indicator	Source	Data Year Range	Indicator definitions and construction
1.3 <sup>i</sup> Obtaining/paying for an ID card	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2010-2011	This indicator looks at the process for obtaining/paying for an ID card (such as a national ID card or a driving licence).  Countries were evaluated using the following scoring criteria: 4= Cards can easily be requested electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists  In cases where the process is carried out at the state or city level, the EIU assesses the process in the capital or largest city. The assessment incorporates both ID cards and driving licences in one indicator: if obtaining and/or paying for one electronically is not possible, a country does not receive the highest score (although a country is not penalised if there is no national ID card). The payment aspect of the process was specifically considered for this indicator (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
1.4 <sup>1</sup> Automotive costs: tolls and fines	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2010-2011	This indicator looks at the process for paying for vehicle-related costs. Such costs may include tolls (roads and bridges), zone fees and various traffic fines.  Countries were evaluated using the following scoring criteria:  4= All fees can easily be paid electronically;  3= System exists but has one major drawback;  2= System exists but has several drawbacks;  1= System is planned or in beta etc.;  0= No such system exists  In cases where the process is carried out on the state or city level, the EIU assesses the process in the capital or largest city. In some cases, one or more of the costs are not applicable to the country and are not considered in the score. The payment aspect of the process was specifically considered for this indicator (where applicable). The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
1.5 <sup>†</sup> Public transit payments	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2010-2011	This indicator looks at whether transit costs can fully and easily be paid electronically.  Countries were evaluated using the following scoring criteria: 4= Public transit fees can fully and easily be paid electronically; 3= Electronic payments are possible but there is one major drawback; 2= Electronic payments are possible but the system has several drawbacks; 1= Electronic payments are planned or in beta (testing); 0= No such system exists  Both national and regional transportation schemes are assessed. The payment aspect of the process was specifically considered for this indicator (where applicable). Country-level analysis varies based on the types of public transportation available. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.



## 2) GOVERNMENT-TO-CITIZEN (G2C)

This category assesses the extent to which various government transfers to citizens can be completed electronically. These transactions are: income tax refunds, social security benefits, government health benefits and unemployment, workers' compensation and welfare benefits.

Indicator	Source	Data Year Range	Indicator definitions and construction
2.1 <sup>i</sup> Income tax refunds	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2009-2011	This indicator looks at the process of calculating and requesting income tax refunds electronically.
			Countries were evaluated using the following scoring criteria:  4= Refunds can fully and easily be calculated and requested electronically;  3= System exists but has one major drawback;  2= System exists but has several drawbacks;  1= System is planned or in beta etc.;  0= No such system exists
			This indicator assesses national (or federal) income tax refunds. In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. Countries that do not have an income tax are scored using a proxy tax. The EIU considers the lack of publicly available information, the complexity of the overall process and/or an in-person requirement to be a potential drawback.
2.2 <sup>i</sup> Social security benefits	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2011	This indicator assesses whether individuals can register for social security benefits online, calculate benefits, submit benefit requests, and track benefits via an online system.
			Countries were evaluated using the following scoring criteria:  4= Benefits can fully and easily be calculated and requested electronically;  3= System exists but has one major drawback;  2= System exists but has several drawbacks;  1= System is planned or in beta etc.;  0= No such system exists
			In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
2.3 <sup>i</sup> Unemployment, workers' comp and welfare benefits	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2011	This indicator looks at the process of requesting unemployment, workers' compensation and welfare benefits electronically.
comp and wedate beliefts			Countries were evaluated using the following scoring criteria: 4= Benefits can fully and easily be requested electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists
			Aggregating the benefits into one indicator means that if not all of the benefits can be requested electronically, a country does not receive the highest possible score. In some cases, one or more of the benefits are not applicable to the country and are not considered. Conditional cash transfers are sometimes considered. In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.

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Source	Data Year Range	Indicator definitions and construction
Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2011	This indicator looks at the process of requesting government health benefits electronically.  Countries were evaluated using the following scoring criteria: 4= Benefits and payments (where applicable) can fully and easily be requested electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists  Scores reflect the diversity of government health benefit systems worldwide. The payment aspect of the process was specifically considered for this indicator (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential
	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government	Economist Intelligence 2011 Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government

## 3) BUSINESS-TO-GOVERNMENT (B2G)

This category captures the extent to which businesses can complete various transactions electronically. These transactions are: income tax payments, value-added/sales tax payments, social security and other contributions and company registration and payment of fees.

Indicator	Source	Data Year Range	Indicator definitions and construction
3.1 <sup>i</sup> Income tax payments	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2009-2011	This indicator looks at the process of paying income taxes by businesses, including whether income taxes can fully and easily be calculated and filed electronically.  Countries were evaluated using the following scoring criteria:  4=Income taxes can fully and easily be calculated and filed electronically;  3=System exists but has one major drawback;  2=System exists but has several drawbacks;  1=System is planned or in beta etc.;  0=No such system exists  In some cases, the payment aspect of the process was specifically considered (where applicable). This indicator assesses national (or federal) income taxes. Assessment is based on filing, registration, submission and payment of income tax. On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. Countries that do not have an income tax are scored using a proxy tax. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.



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Indicator	Source	Data Year Range	Indicator definitions and construction
3.2 <sup>i</sup> VAT/sales tax payments	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2009-2011	This indicator looks at the process of paying value-added and sales taxes by businesses, including whether these taxes can fully and easily be calculated and filed electronically.
			Countries were evaluated using the following scoring criteria: 4=VAT/sales taxes can fully and easily be calculated and filed electronically 3=System exists but has one major drawback; 2=System exists but has several drawbacks; 1=System is planned or in beta etc.; 0=No such system exists
			Assessment is based on filing, registration, submission and payment of these taxes. In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. Countries that do not have a VAT or sales tax (or a closely-related tax that could be used as a proxy) score a zero. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
3.3 <sup>i</sup> Social security and other contributions	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2010-2011	This indicator looks at the process of paying social security and other contributions by businesses, including whether these contributions can fully and easily be calculated and filed electronically.
			Countries were evaluated using the following scoring criteria: 4= Contributions can fully and easily be calculated and filed electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists
			Assessment is based on filing, registration, submission and payment of contributions. In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
3.4 <sup>i</sup> Company registration and payment of fees	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2011	This indicator looks at the process by which companies register and pay associated fees.
paymentorices			Countries were evaluated using the following scoring criteria: 4= The registration process can be completed electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists
			Assessment is based on whether registration and payment of fees can be completed electronically, as well as the user-friendliness of the online service. Because company registration processes vary by country, the payment aspect of the process was specifically considered only in some cases (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The ETU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.



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## 4) GOVERNMENT-TO-BUSINESS (G2B)

This category captures the extent to which various government transfers to businesses can be completed electronically. These transactions are: refunds for income and value-added/sales taxes, payments for goods and services and the disbursement of loans.

Indicator	Source	Data Year Range	Indicator definitions and construction
4.1 <sup>i</sup> Income tax refunds	Economist Intelligence 2009-201 Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2009-2011	This indicator looks at the process of calculating and requesting income tax refunds electronically.
			Countries were evaluated using the following scoring criteria:  4 — Refunds can fully and easily be calculated and requested electronically;  3 = System exists but has one major drawback;  2 = System exists but has several drawbacks;  1 = System is planned or in beta etc.;  0 = No such system exists
			This indicator assesses national (or federal) income tax refunds. In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. Countries that do not have an income tax are scored using a proxy tax. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
4.2 <sup>i</sup> VAT/sales tax refunds	Economist Intelligence 203 Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2011	This indicator looks at the process of calculating and requesting sales or value-added tax refunds electronically.
			Countries were evaluated using the following scoring criteria:  4= Refunds can fully and easily be calculated and requested electronically;  3= System exists but has one major drawback;  2= System exists but has several drawbacks;  1= System is planned or in beta etc.;  0= No such system exists
			In some cases, the payment aspect of the process was specifically considered (where applicable). On its own, downloading forms from a website is not considered to be a part of the electronic process for this indicator. The EIU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.
4.3 <sup>i</sup> Payments for goods and services	Economist Intelligence Unit analyst qualitative assessment based on	2009-2011	This indicator looks at whether the government offers an electronic platform (website) for procurement and whether the platform has payment capabilities.
	information obtained from the domestic websites of the appropriate government body.		Countries were evaluated using the following scoring criteria: 4= Payments can fully and easily be handled electronically; 3= System exists but has one major drawback; 2= System exists but has several drawbacks; 1= System is planned or in beta etc.; 0= No such system exists
			In some cases, the payment aspect of the process was specifically considered (where applicable). The ETU considers the lack of publicly available information, the complexity of the overall process, and/or an in-person requirement to be a potential drawback.



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Indicator	Source	Data Year Range	Indicator definitions and construction
4.4 <sup>i</sup> Disbursements of loans	Economist Intelligence Unit analyst qualitative assessment based on information obtained from the domestic websites of the appropriate government body.	2011	This indicator looks at whether loan requests and the disbursement of loans can be completed electronically via a government provider.  Countries were evaluated using the following scoring criteria: 4= Loans can fully and easily be disbursed electronically; 3= Loans can be disbursed electronically but there is one major drawback to the current system; 2= Process of loan application and/or disbursal has at least two obvious drawbacks; 1= System is planned or in beta etc.; 0= No such system exists  In some cases, the payment aspect of the process was specifically considered (where applicable). The complexity of the loan application/disbursal process is considered in scoring this indicator. If the government does not provide the loans directly (ie, a financial institution is used as an intermediary), the highest score a state can receive is a three owing to the added complexity of using a third party. The diversity of schemes by which governments disburse loans necessitates a qualitative assessment of the process. The EIU considers the lack of publicly available information and/or an in-person requirement to be a potential drawback.

## 5) INFRASTRUCTURE

This category examines the existing technological infrastructure that supports the adoption of e-payments. It comprises indicators that assess the number of ATMs and point-of-sale (POS) terminals per 10,000 people, the diffusion of broadband, public-access terminals per capita, mobile subscriptions per 100 people, the level of development of stored value cards, the level of development of 3G and other technologies, and the level of development of contactless and mobile payments.

Indicator	Source	Data Year Range	Indicator definitions and construction
5.1" Number of ATMs per 10,000 people	The primary data source is the Financial Access 2010 report published by the World Bank. If World Bank data is not available, a national statistical source or other reliable source is used.	2008-2011	This indicator looks at the number of automatic teller machines (ATMs) per 10,000 people (out of total population).
	Consultative Group to Assist the Poor, Financial Access 2010.		
5.2 <sup>ii</sup> Number of POS terminals per 10,000 people	The primary data source is the Financial Access 2010 report published by the World Bank. If World Bank data is not available, a national statistical source or other reliable source is used.	2008-2011	This indicator looks at the number of point-of-sale (POS) terminals per 10,000 people (out of total population).
	Consultative Group to Assist the Poor, Financial Access 2010.		



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Indicator	Source	Data Year Range	Indicator definitions and construction
5.3 <sup>ii</sup> Diffusion of broadband	The primary data source for this indicator is a proprietary Economist Intelligence Unit's database (figures are taken from a variety of sources, including Pyramid Research data and aggregated by EIU analysts to ensure consistency and comparability of data). If EIU data is not available, a national statistical source or other reliable source is used.	2009-2011	This indicator looks at the number of broadband Internet subscriptions (subscriber lines with a transmission speed greater than 128 Kbps, including primary rate interface (PRI) ISDN connections, xDSL connections, cable modem and cable telephony connections and high-speed fixed wireless connections) per 100 people (ie, of total population).
5.4 <sup>i</sup> Public-access terminals per capita	Economist Intelligence Unit analyst qualitative assessment based on official national sources, which vary by country.	2006-2011	This indicator looks at public-access terminals per capita.  Countries were evaluated using the following scoring criteria: 4= Public-access terminals are widely available (eg, public libraries, transportation terminals, Wi-Fi hotspots, Internet cafés, call centres); 3= Public-access terminals are generally available; 2= Public-access terminals exist but they are rare; 1= There is a plan to implement public-access terminals in the country/there are public-access terminals in trial phase; 0= There are no public-access terminals in this country  Research defines public-access terminals as points of access to information and/or the Internet. These terminals include, but are not limited to, Wi-Fi hotspots, Internet cafes, call centres, public libraries and transportation terminals. Assessment is qualitative and is based on availability of terminals in metropolitan area(s) (ie commercial centres and/or major city).
5.5 <sup>††</sup> Mobile subscriptions per 100 people	The primary data source for this indicator is a proprietary Economist Intelligence Unit's database (figures are taken from a variety of sources, including the International Telecommunication Union, and aggregated by EIU analysts to ensure consistency and comparability of data). If EIU data is not available, a national statistical source or other reliable source is used.	2008-2011	This indicator looks at the number of mobile phone subscriptions per 100 people (out of total population). Research considers subscriptions to include the aggregate number of active mobile phone numbers—used and unused (both prepaid and post-paid).
5.6 <sup>i</sup> Level of development of stored value cards	Economist Intelligence Unit analyst qualitative assessment based on official national sources, which vary by country.	2005-2011	This indicator looks at the development and integration of stored value cards.  Countries were evaluated using the following scoring criteria:  4= Stored value cards are well developed and integrated across the most common uses (eg, telephone, public transportation, public services and small payments)  3= Various types of cards exist but do not cover all uses or are poorly integrated;  2= Few types of cards exist;  1= At least one type of card is in a trial phase;  0= No stored value cards exist  In addition to other uses, research considers stored value cards to include, prepaid cards for making telephone calls, for using public transportation, for paying for public services and for making other small payments.



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Indicator	Source	Data Year Range	Indicator definitions and construction
5.7 <sup>i</sup> Level of development of 3G and other technologies	Economist Intelligence Unit analyst qualitative assessment based on official national sources, which vary by country.	2007-2011	This indicator looks at the development of 3G and other technologies (eg 4G or more advanced technologies) in terms of geographic coverage.  Countries were evaluated using the following scoring criteria: 4 = 3G is well developed technologically and widely deployed geographically; 3 = 3G is in place but suffers from some shortcomings in technology or availability; 2 = 3G has been widely deployed, but suffers from shortcomings and/or limited adoption; 1 = 3G exists but is not widely deployed; 0 = 3G technologies do not exist in this market  When data on geographic coverage is not available, research makes an assessment based on the percentage of 3G mobile phone subscriptions out of the total number of subscriptions. Otherwise, a qualitative assessment of 3G deployment and coverage is made.
5.8 <sup>i</sup> Level of development of contactless and mobile payments	Economist Intelligence Unit analyst qualitative assessment based on official national sources, which vary by country.	2008-2011	This indicator looks at the development of contactless and mobile payments in terms of geographic coverage.  Countries were evaluated using the following scoring criteria: 4— Contactless and mobile payments are widely deployed geographically; 3— Contactless and/or mobile payments are in place, but suffer from shortcomings in technology or availability; 2— Contactless and/or mobile payments are sufficiently deployed, but suffer from limited adoption; 1— Contactless and/or mobile payments exist on very limited scale; 0— Contactless and/or mobile payments do not exist in this market  Research defines contactless payments as those made by credit cards and debit cards, key fobs, smartcards or other devices which use radio-frequency identification for making secure payments. Mobile payments are defined as payments made by individuals via a mobile phone. Mobile payment models include: premium short-message-service based transactional payments, direct mobile billing, mobile web payments, and contactless near field communication. The assessment incorporates both mobile payments and contactless payments in one indicator: each element is not necessarily evaluated individually in order to score each country.



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## 6) SOCIAL AND ECONOMIC CONTEXT

This category examines the social and economic environment that supports the adoption of e-payments. It comprises indicators that assess literacy and educational levels, Internet/technology savviness, the percentage of the population and businesses using banks or other financial institutions, the provision of financial education, the proportion of businesses placing orders via the Internet, the proportion of consumer orders of goods via the Internet, and the percentage of the population with payment card(s).

Indicator	Source	Data Year Range	Indicator definitions and construction
6.1 <sup>ii</sup> Literacy level	The primary source for literacy data is the UN Statistics Division.	2000-2011	This indicator looks at adult (age 15+) literacy rates (percentage of adults who can both read and write with understanding, a short, simple statement on his or her everyday life out of the total population) in a given country.
6.2 <sup>ii</sup> Educational level	The primary sources for education level data are the UN Statistics Division or the UN Educational, Scientific and Cultural Organization Institute for Statistics.	2006-2010	This indicator looks at the number of years of schooling that a child of school entrance age in a given country can expect to receive if prevailing patterns of age-specific enrolment rates were to stay the same throughout the child's life.
6.3 <sup>i</sup> Internet/technology savviness	Economist Intelligence Unit analyst qualitative assessment based on official national sources, which vary by country.	2009-2011	This indicator looks at how savvy the general population is about technology and how readily the population adopts innovations.  Countries were evaluated using the following scoring criteria: 4= Population is generally extremely savvy about technology and readily adopts innovations; 3= Savvy about technology but generally second-tier adopters; 2= Neither savviest nor most eager, but technologies have diffused sufficiently; 1= Poorly trained and sluggish in adopting technology; 0= Very low levels of technological knowledge and adoption  Researchers make assessments based on the observed uptake of new personal technology trends, Internet penetration and modes of Internet access.
6.4 <sup>i</sup> Percentage of population using banks/other financial institutions	Some of the primary sources used include the following: Consultative Group to Assist the Poor, Financial Access 2010, Consultative Group to Assist the Poor, Financial Access 2009, International Monetary Fund, Access to Finance project.	2009-2011	This indicator looks at the number of deposit accounts in a commercial bank per 1,000 adults.  Countries were evaluated using the following scoring criteria: 4 = >2,000 deposit accounts in a commercial bank per 1,000 adults; 3 = 1,500-1,999; 2 = 1,000-1,499; 1 = 500-999; 0 = <500



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Indicator	Source	Data Year Range	Indicator definitions and construction
6.5 <sup>i</sup> Percentage of businesses	Economist Intelligence Unit analyst qualitative assessment based on data	2007-2011	This indicator looks at the extent to which commercial entities utilise financial institutions.
using banks/other financial institutions	obtained from the World Bank Group, Doing Business Project and the World Bank Group, Enterprise Survey.		Countries were evaluated using the following scoring criteria: 4=80%+ use banks and other financial institutions; 3=60-79%; 2=40-59%; 1=20-39%; 0=0-19%
			Research considers whether or not it is compulsory for businesses to hold a bank account (ie, a bank account is mandatory to start/register a business, as indicated in the World Bank Doing Business report), the percentage of firms with a line of credit or loans from financial institutions, taken from results obtained in the Enterprise Survey (a World Bank initiative), and the size of the informal economy (reflecting the proportion of firms operating without formal financial services).
6.6 <sup>i</sup> Provision of financial	The primary data source is the Financial Access 2010 report published by the World	2009-2011	This indicator looks at the regulatory requirements for financial institutions regarding disclosure at account opening.
education	Bank. If World Bank data is not available, a national statistical source or other reliable source is used.  Consultative Group to Assist the Poor, Financial Access 2010.		Countries were evaluated using the following scoring criteria:  4= Financial institutions provide clear consumer protection and educational information about financial products and services (12-16 checks in the World Bank Financial Access 2010 report);  3= Financial institutions make some efforts (9-11 checks in the World Bank Financial Access 2010 report);  2= Financial institutions make limited efforts (6-8 checks in the World Bank Financial Access 2010 report);  1= Financial institutions make very limited efforts (1-5 checks in the World Bank Financial Access 2010 report);  0= Financial institutions make no efforts (no checks in the World Bank Financial Access 2010 report)
			A regulatory basis for disclosure is part of the foundation of a strong system of financial education and consumer protection. These disclosure requirements are reported as checks in the World Bank's Financial Access 2010 report, covering four separate aspects of disclosure requirements—notifying customers in writing of pricing, terms & conditions, general requirements (language, disclosure, recourse rights, etc.), and requirements related to deposit and credit products.
6.7 <sup>i</sup> Proportion of businesses placing orders via the Internet	One of the main sources used was the Information Economy 2010 report published by the	2005-2011	This indicator looks at the proportion of enterprises that place orders over the Internet. $ \\$
	UN Conference on Trade and Development.		Countries were evaluated using the following scoring criteria: 4=55%+ place orders over the Internet 3=40-54%; 2=25-39%; 1=10-24%; 0=0-9%
			To maximise consistency across all countries, research considered enterprises with 10 or more persons employed placing orders via the Internet where possible (as defined by the primary source used in the analysis).
6.8" Proportion of consumer orders of goods via the	Economist Intelligence Unit analyst qualitative assessment based on official	2008-2011	This indicator looks at the percentage of Internet users that make purchases of goods or services online.
Internet	national sources, which vary by country.		The age range for Internet users varies by country.

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Indicator	Source	Data Year Range	Indicator definitions and construction
6.9 <sup>i</sup> Percentage of population with payment card(s)	One of the main sources used was the Bank for International Settlements.	2008-2011	This indicator looks at the percentage of the total population with debit, credit and other electronic payment card(s).
,			Countries were evaluated using the following scoring criteria:  4=90%+ of the population has a payment card (very high penetration)  3=75-89% of the population has a payment card (high penetration);  2=50-74% of the population has a payment card (moderate penetration);  1=25-49% of the population has a payment card (low penetration);  0=Less than 25% of the population has a payment card (very low penetration)
			This percentage is referred to as a penetration rate—the number of payment cards relative to the total population in a given country.

## 7) POLICY CONTEXT

This category provides an assessment of the policy environment that helps to support e-payments adoption. It comprises indicators that assess government commitment to e-payment security, integrating the informal economy and the Financial Action Task Force.

Indicator	Source	Data Year Range	Indicator definitions and construction
7.1 <sup>i</sup> Government commitment to e-payment security	Economist Intelligence Unit analyst qualitative assessment based on official national sources, which vary by country.	2003-2011	This indicator looks at governments' commitment to electronic payment security.  Countries were evaluated using the following scoring criteria:  4= Government makes active efforts to secure electronic payments both in its activities and in the private sector;  3= It makes some efforts, probably more in its activities;  2= It makes efforts, but they are uneven etc.;  1= It plays only a limited role;  0= It is inactive in this area  Research assigns scores based on the extent of e-commerce laws, whether e-commerce laws have been translated into the national regulatory regime, and whether regulations are actively enforced.
7.2 <sup>i</sup> Government commitment to integrating the informal economy	The primary source for the size of the informal economy a policy research working paper from The World Bank Development Research Group Poverty and Inequality Team & Europe and Central Asia Region Human Development Economics Unit.  The primary source to determine the existence of a strategy document is the Financial Access 2010 report published by the World Bank. Consultative Group to Assist the Poor, Financial Access 2010.	2005-2007	This indicator looks at governments' commitment to integrating the informa economy.  Countries were evaluated using the following scoring criteria: 4= Government makes active efforts to integrate the informal economy or has already largely absorbed it; 3= It makes some efforts; 2= It makes efforts, but they are uneven etc.; 1= It plays only a limited role; 0= It is inactive in this area  Research assesses the size of the informal economy and whether a country has a strategy document in place to address its informal economy. Research uses the World Bank definition of the informal economy, where the informal economy refers to activities and income that are partially or fully outside government regulation, taxation, and observation.

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Indicator	Source	Data Year Range	Indicator definitions and construction
7.3 <sup>i</sup> Government commitment to the Financial Action Task Force (FATF)	Financial Action Task Force (FATF), The Asia/Pacific Group on Money Laundering (APG), The Caribbean Financial Action Task Force (CFATF), The Eurasian group on combating money laundering and financing of terrorism (EAG), The Eastern and South African Anti Money Laundering Group (ESAAMLG), Financial Action Task Force on Money Laundering in South America (GAFISUD), the Intergovernmental Action Group against Money Laundering in West Africa (GIABA), the Middle East and North Africa Region (MENAFATF), the Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism (MONEYVAL), the International Monetary Fund (IMF), and the World Bank (WB).	2005-2011	This indicator looks at how compliant a country is with the 49 Financial Action Task Force recommendations on anti-money laundering and combating the financing of terrorism.  Countries were evaluated using the following scoring criteria: 4=80%+ compliant with the FATF's 49 recommendations; 3=60-79% compliant; 2=40-59% compliant; 0= less than 20% compliant; 0= less than 20% compliant  The FATF outlines four compliance ratings: Compliant, Largely compliant, Partially compliant, Non-compliant, or as Not applicable. States receive points for being compliant, partially compliant or largely compliant on a recommendation according to the scoring criteria above. If a recommendation is not applicable, a state's score is based on the total number of applicable recommendations.

## **DEPENDENT VARIABLES**

Dependent variables were included in the analysis in order to emphasise the relevancy of these variables to the scores achieved in the 2011 GEAR study.

Indicator	Source	Data Year Range	Indicator definitions and construction
E-Participation Index	Global Information Technology Report published by the World Economic Forum.	2010	The E-Participation Index is a complement to the UN E-Government Development Index. The E-Participation Index assesses the quality and usefulness of information and services provided by a country for the purpose of engaging its citizens in public policy making through the use of e-government programmes. It is measured on a scale of 0-1 (where a score of 1 reflects government inclusion of citizens in their decision-making process, government provision of information knowledge, and government consultation with citizens to obtain feedback).
Government Online Service Index	Global Information Technology Report published by the World Economic Forum.	2010	The Government Online Service Index is one of the three components of the UN E-Government Development Index, which is a widely recognised measure of public sector capacity to provide electronic and mobile services. The Government Online Service Index measures four online service development phases: stage 1—emerging information services, stage 2—enhanced information services, stage 3—transactional services, and stage 4—connected services. The Index is measured on a scale of 0-1 (where a score of 1 reflects the best delivery of online services by the government).
GDP per capita	Economist Intelligence Unit and national sources, which vary by country.	2010	Gross domestic product (GDP) per capita is a measure of total output of a country divided by the population.



## Appendix III: Select bibliography

#### Infrastructure:

Source for indicators 5.1 and 5.2:

The Consultative Group to Assist the Poor/The World Bank Group Report (September 2010). "Financial Access 2010. The State of Financial Inclusion Through the Crisis". URL: http://www.cgap.org/gm/document-1.9.46570/FA\_2010\_Financial\_Access\_2010\_Rev.pdf

#### Social and economic context:

Source for indicator 6.1:

UNESCO Institute for Statistics, Data on national literacy rates for youths (15-24) and adults (15+). Accessed June 2011. URL: http://unstats.un.org/unsd/demographic/products/socind/literacy.htm

Source for indicator 6.2:

UNESCO Institute for Statistics, Data on school life expectancy (years) from primary to tertiary by country and sex. Accessed June 2011. URL: http://unstats.un.org/unsd/demographic/products/socind/literacy.htm

Sources for indicator 6.4:

The Consultative Group to Assist the Poor/The World Bank Group Report (September 2010). "Financial Access 2010. The State of Financial Inclusion Through the Crisis". URL: http://www.cgap.org/gm/document-1.9.46570/FA\_2010\_Financial\_Access\_2010\_Rev.pdf

The Consultative Group to Assist the Poor/The World Bank Group Report (September 2009). "Financial Access 2009. Measuring Access to Financial Services around the World". URL: http://www.cgap.org/gm/document-1.9.38735/FA2009.pdf

*Sources for indicator 6.5:* 

The International Bank for Reconstruction and Development/The World Bank Report: Doing Business 2011. Accessed September 2011. URL: http://www.doingbusiness.org/

The World Bank Group: Enterprise Surveys. Accessed September 2011. URL: http://www.enterprisesurveys.org/

Source for indicator 6.6:

The Consultative Group to Assist the Poor/The World Bank Group Report (September 2010). "Financial Access 2010. The State of Financial Inclusion Through the Crisis". URL: http://www.cgap.org/gm/document-1.9.46570/FA\_2010\_Financial\_Access\_2010\_Rev.pdf



## **Appendix III**Select bibliography

Source for indicator 6.7:

United Nations Conference on Trade and Development (2010). "Information Economy Report 2010. ICTs, Enterprises and Poverty Alleviation". URL: http://www.unctad.org/en/docs/ier2010\_embargo2010\_en.pdf

Source for indicator 6.9:

Bank for International Settlements (March 2011). "Statistics on Payment and Settlement Systems in the CPSS Countries: Figures for 2009"

#### **Policy context:**

Sources for indicator 7.2:

The World Bank Development Research Group Poverty and Inequality Team & Europe and Central Asia Region Human Development Economics Unit (July 2011). "Shadow Economies All over the World: New Estimates for 162 Countries from 1999 to 2007," by Friedrich Schneider, Andreas Buehn, and Claudio E. Montenegro. URL: http://www-wds. worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=6418751 0&searchMenuPK=64187511&entityID=000158349\_20101014160704&cid=3001\_4>

The Consultative Group to Assist the Poor/The World Bank Group Report (September 2010). "Financial Access 2010. The State of Financial Inclusion Through the Crisis". URL: http://www.cgap.org/gm/document-1.9.46570/FA\_2010\_Financial\_Access\_2010\_Rev.pdf

Sources for indicator 7.3:

Financial Action Task Force (FATF). URL: http://www.fatf-gafi.org/document/25/0,3746,en\_32250379\_32236963\_43649561\_1\_1\_1\_1,00.html

The Asia/Pacific Group on Money Laundering (APG). URL: http://www.apgml.org/documents/default.aspx?DocumentCategoryID=17

The Caribbean Financial Action Task Force (CFATF). URL: http://www.cfatf-gafic.org/

The Eurasian group on combating money laundering and financing of terrorism (EAG). URL: http://www.eurasiangroup.org/

The Eastern and South African Anti Money Laundering Group (ESAAMLG). URL: http://www.esaamlg.org/work\_programme/activities.php

Financial Action Task Force on Money Laundering in South America (GAFISUD). URL: http://www.gafisud.info/home. htm

The Intergovernmental Action Group against Money Laundering in West Africa (GIABA). URL: http://www.giaba.org/
The Middle East and North Africa Region (MENAFATF). URL: http://www.menafatf.org/

The Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism (MONEYVAL). URL: http://www.coe.int/t/dghl/monitoring/moneyval/

The International Monetary Fund (IMF). URL: http://www.imf.org/external/index.htm

The World Bank Group. URL: http://www.worldbank.org/

#### **Dependent Variables:**

World Economic Forum, "Global Information Technology Report 2010-2011". URL: http://www.weforum.org/reports

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