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Governments and Global Supply Chains:

Measuring Performance in a Networked World

March 2008

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-James Lewis, Project Director
March 2008

Governments and Global Supply Chains: Measuring Performance in a Networked World

We live and work within a very different economic context. National economies are ever more tightly woven together. What drives this "globalization" is that deep international business connections let companies produce goods and services at lower cost. Economic interconnections are not new – there have always been links between economies, and these links have grown steadily for the last three hundred years. However, they have taken on a new character since 1990. Technological change has eroded the limits of geographical distance on economic activity. Production is dispersed around the world. Tightly linked global systems have emerged for many commercial activities. These systems involve complex, geographically dispersed transactions that rely on world-spanning networks for transportation, finance, and communication. Integration provides bigger markets and lower costs. The result is greater wealth for those who participate in globalization.

Government policies and practices affect economic outcomes. Is government action (or inaction) an obstacle to global economic participation? Do governments provide the environment for the services and infrastructure needed to be competitive? The answers to these questions decide how much a country's citizens and businesses can benefit from globalization. This means that governments need to think about economic policy in a new way. The issues created by global economic integration go well beyond traditional trade policy. If globalization is the engine of growth, how countries connect to that engine determines how well they will perform.

Globalization has consequences, and the most important is increased competition, as companies from around the world buy and sell in the same markets. Companies are not the only ones to face global competition. Cities, provinces, and countries compete for investment and jobs. This competition revolves around investors' decisions on whether one location offers more advantages than another. Strategic factors, like access to markets or to resources, can dictate location, but companies also look at an increasingly important set of costs – the costs of connecting to the global economy.

Whether we like or dislike globalization is not the issue. Improving how companies and consumers connect to other economies has become a central task for policy. Governments can help or hinder their citizens when it comes to connecting to the global economic machine. Openness to trade is only part of this. A range of factors involving governance, infrastructure, and human capital affect economic performance. The costs of doing business, and the costs and time it takes to move people, goods, money, and ideas across borders are key variables for national performance in the global economy.

Improving how companies and consumers connect across borders is a central task for policy. The best policies are those that offer more opportunities and make it easier to connect, but since this involves an aggregate of many different government activities, this connectivity is not always easy to measure. The following survey lets governments assess how well they are performing in delivering the services for interconnection. It provides benchmarks against which they can measure their performance and suggestions for improvement.

The survey focuses on government policies that directly affect global economic competitiveness, and CSIS used a number of variables to measure performance. In designing our survey, we mirrored the processes that many companies use when deciding where to locate or invest. We also drew upon the concepts of "lean manufacturing" and "global value chains," business ideas on how to streamline operations and reduce costs. From this, we developed a list of quantitative questions. Many of the questions can be answered by using publicly available data, but some require country-specific research. Some questions directly measure connectivity, while others are proxies (such as counting the number of hospital beds as a way to measure health care). We divided our questions into six categories of activities and used the answers to score how well a country performs in each:

1. **National Policies for Openness in Trade and Markets** (13 questions): Openness means willingness by governments to let foreign companies participate directly in a national economy. Governments demonstrate openness not only through tariffs but also through a series of other administrative and regulatory policies that can either promote or interfere with the flow of goods and services.
2. **Best Practices for International Trade** (9 questions): Governments can facilitate cross-border trade by minimizing chokepoints in import and export processes, particularly the time and cost associated with getting goods, people, or services into and out of countries.
3. **Infrastructures for a Global Economy** (15 questions): Infrastructure in an era of global commerce has come to mean more than traditional elements like roads and airports. This section is divided into three broad components: a.) physical infrastructure; b.) utilities; and c.) IT/communication infrastructure.
4. **Financial Services for Cross-Border Commerce** (14 questions): Multinational firms report that fiscal policies matter significantly in country-site selection. The costs associated with opening and operating businesses within a country affect the competitiveness of a country in attracting global capital. This section focuses on start-up costs, business taxes, and the time required for businesses to meet these fiscal requirements.
5. **Human Capital** (17 questions): Human capital attracts investment. Governments play a direct role in workforce development through spending on education and training. A workforce with high educational attainments provides an advantage to a country. This section focuses on overall education spending, enrollment, literacy, the cost associated with hiring, and training programs.
6. **Effective Legal and Enforcement Systems** (18 questions): This section deals with matters such as regulations on contracting, property registration, and associated costs.

To put these scores in context, we created "benchmarks" against which to compare performance. We based these benchmarks on performance in OECD countries; in the top five trading economies ("The Big Five"); and in what we call "Exemplars," five countries that have made globalization work for them as an engine of growth. Comparing a national score to the benchmarks tells how well a government performs in the global economy. The combination of metrics and benchmarks is not intended to grade or rank countries, but rather to allow policymakers to identify areas for improvement.[1]

We tested the survey by looking at 20 countries. We chose countries from different geographic regions, with different levels of wealth and population. The results identify both strengths and areas for improvement. The goal is not to rank countries, but to help governments, companies, and citizens identify areas for improved performance. While no single country has the "perfect" combination of policies and practices, we can draw upon the experience of nations like these and others to find "best practices" for improving national competitiveness. Our website will link to best practice reports and studies drawn from the World Bank, IMF, UN, OECD, and other sources, providing guideposts and specific country experiences.

Perfect Score = 100	
1. Canada	80
2. U.S.	78
3. France	69
4. Israel	66
5. Panama	56
6. Poland	54
7. Croatia	54
8. Turkey	53
9. South Africa	52
10. China	50
11. Philippines	49
12. Indonesia	48
13. Mexico	48
14. Russia	45
15. Kazakhstan	45
16. Argentina	45
17. Brazil	44
18. Egypt	42
19. India	41
20. Kenya	40

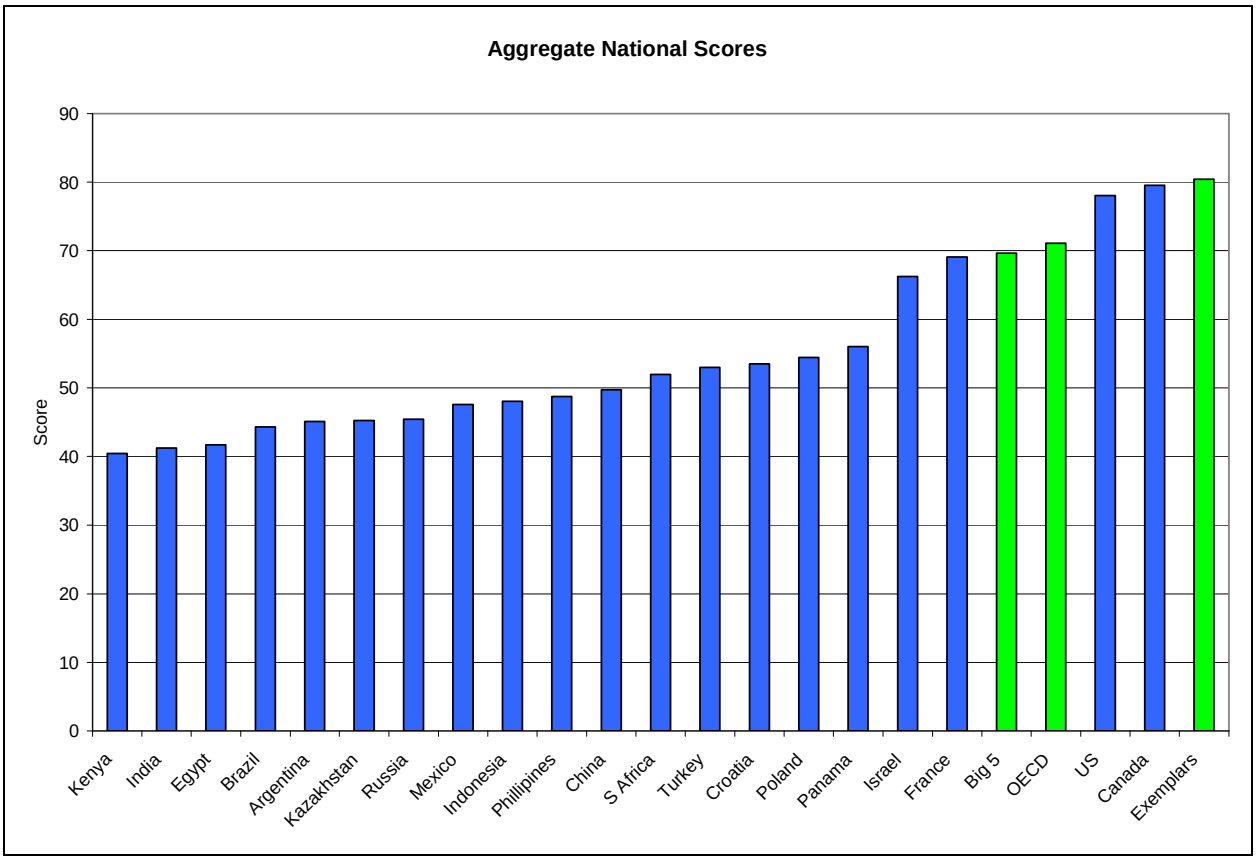
Analysis of Results

Canada, the U.S., France, and Israel scored the highest out of all the sample countries, while at the bottom, Egypt, India, and Kenya's scores were below half of that of the Exemplars. For the benchmark countries, the highest scores were in infrastructure and human capital, and the weakest

[1] The top five traders are the U.S., UK, Germany, Japan, and China. The Exemplars are Singapore, Switzerland, Finland, the Netherlands, and Ireland.

scores were openness and efficient legal and enforcement systems.

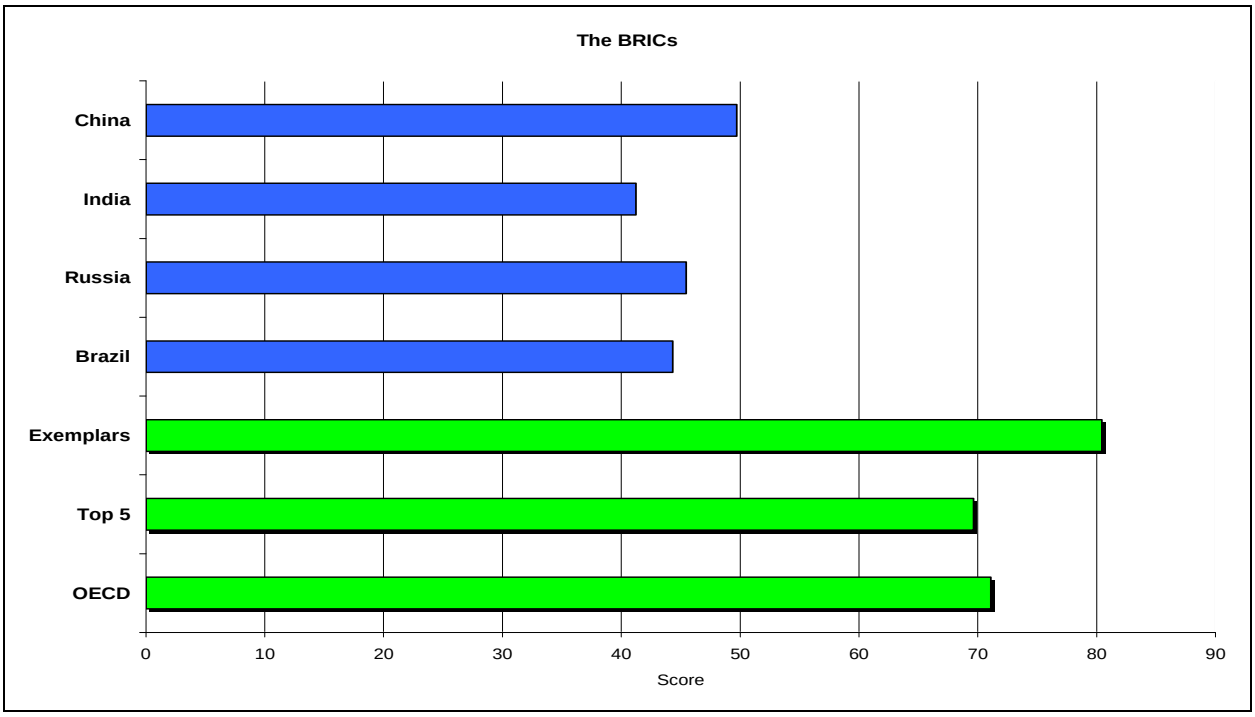
Poor infrastructure, inefficient regulation of trade, and cumbersome legal systems adversely affected many of the sample countries' overall scores. Five of the scores averaged between 51 and 58. Human capital and efficiencies in cross-border commerce drove the scores for top performers. The top 5 countries (with an average aggregate score of 67.5) scored an average of 74 in human capital and 78 in trade efficiency. Similarly, poor infrastructure was the chief cause of a weak overall score. The bottom 5 countries (with an average aggregate score of 42), scored an average of 26 on infrastructure.



It is worth noting that smaller nations in the sample usually did better than the larger nations. This reflects the countries we selected, yet it is a reminder that smaller nations can be competitive in the international economy when they understand their comparative advantages and have the right mix of policies to promote trade and train their workforce. Other studies reinforce this finding; Singapore, Hong Kong, Ireland, New Zealand, Denmark, and Iceland have all received praise for their trade practices and policies.[2]

While the survey does not show rates of change, its results help put global competition in perspective. The BRICs (Brazil, Russia, India, and China) are often presented as the up-and-coming economic powers. These economies have untapped resources, particularly of labor, but they lag behind in government services and infrastructure.

[2] See for example, the World Bank's Doing Business 2008 rankings.



Perhaps the most interesting conclusion is that governments that want to improve their global competitiveness do not need to make every service they offer more efficient. A "targeted fix" could focus government spending and reform efforts onto three areas:

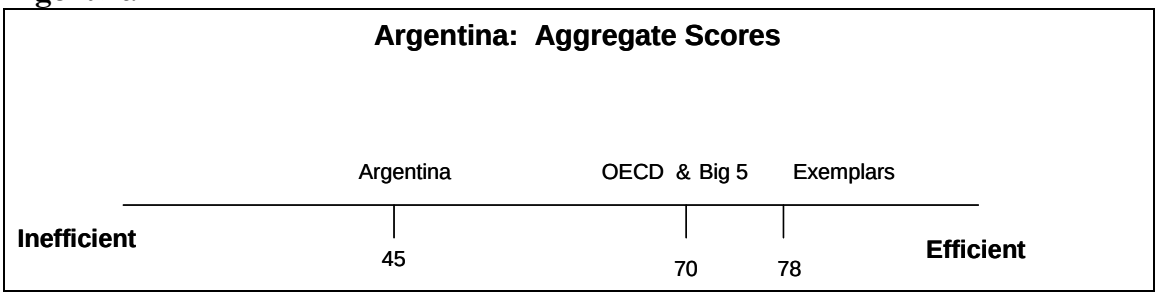
Physical Infrastructure. The state of physical connections – ports, roads, airports, telecom – explained much about why some countries did well with globalization and others did not.

Human Capital. The top countries showed strength in educating and training a competitive workforce.

Efficient Border and Financial Services. Efforts to shorten how long it takes to move goods, money, and people paid off for the entire economy.

National Scores

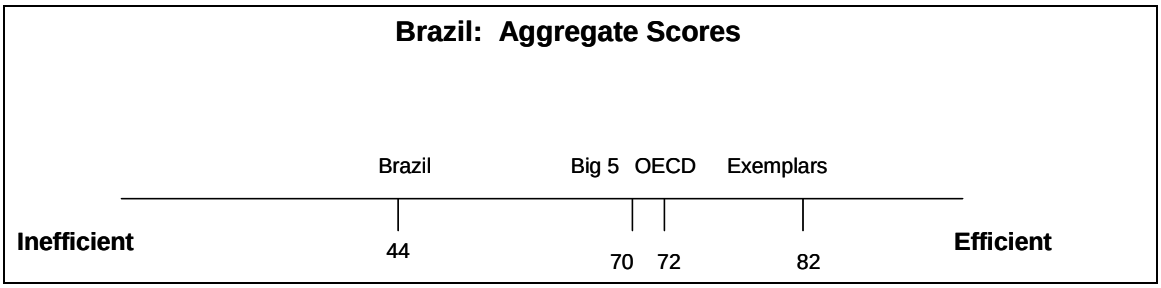
Argentina



Highlights: Argentina's weakest scores were for infrastructure and financial services for cross-border commerce. Less than a third of all roads in Argentina are paved, a basic requirement for efficient

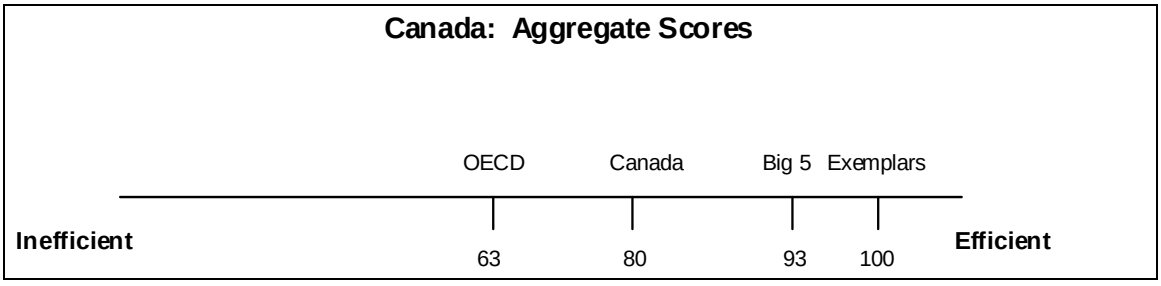
transport. Argentina's water utilities average nearly a week of outages every year, compared to an annual average of 4 hours in OECD countries. Argentina has only 11 secure Internet servers per 1 million people, while in the OECD countries that figure is over 400, despite the fact that Argentina's expenditure on IT as a percent of GDP (7 percent) is similar to the benchmarks. More than 10 percent of all bank loans are non-performing in Argentina, compared to only about 1 percent in the Exemplar countries. Human capital was Argentina's strength. Argentina's adult literacy rate was consistent with that of the OECD countries. Unlike some of the graying OECD and benchmark countries, Argentina has a young population.

Brazil



Highlights: Brazil's legal system is business-friendly in a number of respects. The number of procedures to construct a warehouse (19) was comparable to the benchmark countries (14-18). The average time spent resolving a dispute in court in Brazil was shorter than the OECD by several weeks. However, Brazil's Transparency International Score (which measures corruption) is less than half of the benchmarks. Brazil's weaknesses are in best practices for efficient international trade and infrastructure. Brazil's electrical production per capita was only about one-quarter of the Exemplars. Brazil's broadband subscriber rate per 1,000 people was only 18, whereas the Exemplars' rate was 158. Like Argentina, Brazil has few secure Internet servers available for businesses. Cross-border trade in Brazil faces delays and higher costs. Air cargo takes more than 17 days to clear customs, while the Exemplars' time is about a day and a half. Sea cargo faces similar delays. Costs to import are substantially higher ($1,145 per container in Brazil versus $670 for the benchmarks).

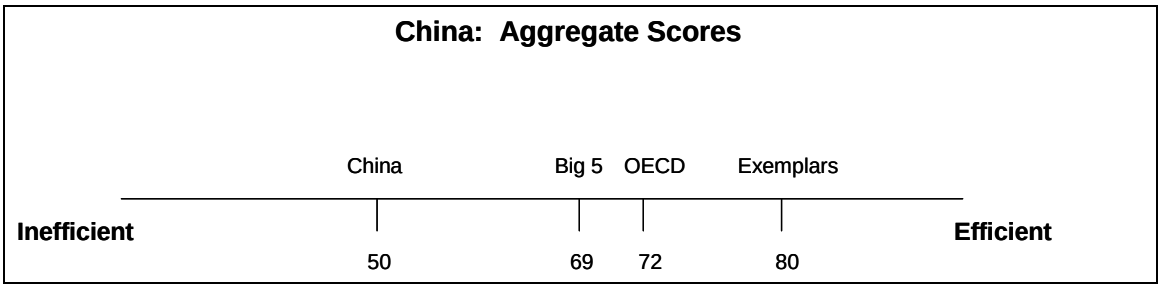
Canada



Highlights: Canada's strongest score was for efficient international trade. Its scores in legal and enforcement systems and human capital were also strong. In many cases, Canada bested the benchmarks. Canada is particularly efficient at moving goods quickly across the border. Air and sea cargo pass through customs in just one day, slightly faster than our top performing countries. Canada requires only 3 documents to import and 4 to export, fewer than any of the benchmark groups. Canada's legal system is well-geared to serve the needs of global commerce. Fewer procedures to enforce contracts are required in Canada (only 17) than in any of the benchmark groups. Registering

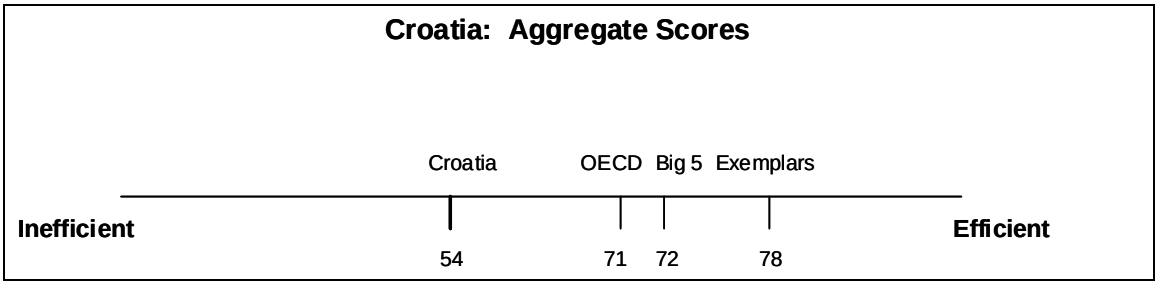
property in Canada is a swift process (10 days), and there are only two required procedures to register a new business (as opposed to 6 for the OECD). Canada was also strong in human capital. Immigration has helped, as more than 20 percent of residents with a graduate education in Canada are immigrants. By comparison, the OECD's figure is only 3.6 percent. Canada also led in spending on public education as a percent of GDP (6.4 percent).

China



Highlights: The cost of exporting and importing to or from China is very low, and time to clear customs is relatively swift. It costs $335 and $375, respectively, to export and import containers in China; the average for our benchmark countries is $630 and $670. Clearance time for air cargo in China is 2.5 days, not far off from the OECD's 1.72 days. Sea cargo clearance (3.5 days) is also comparable to the OECD's 3.3 days. China's weakest score is infrastructure. Its electrical production per capita, for example, was only about 20 percent of that of the leading benchmark group. The availability of secure servers for business, moreover, is extremely low in China (less than one per million people). Agriculture remains China's biggest employment sector (44%, compared to 3% in OECD countries), and the agricultural workforce is largely uneducated. This means there is a huge pool of untapped, but also unskilled, labor. Public health in China is below that of the top performers. Costs associated with hiring a worker are significantly higher for China. China's trade openness is somewhat mixed. Its average tariff level in 2006, for example, was 9.9 percent, in contrast to 4.8 percent for the Exemplar countries and 6.0 percent for the top 5 trading countries. Contract enforcement is cumbersome, and other actions – from registering property to resolving disputes in courts – are slow. On the positive side, security costs for firms were not especially high. China is a safe place to operate a business, but it could benefit from reforms that reduce the graft involved in everyday operations.

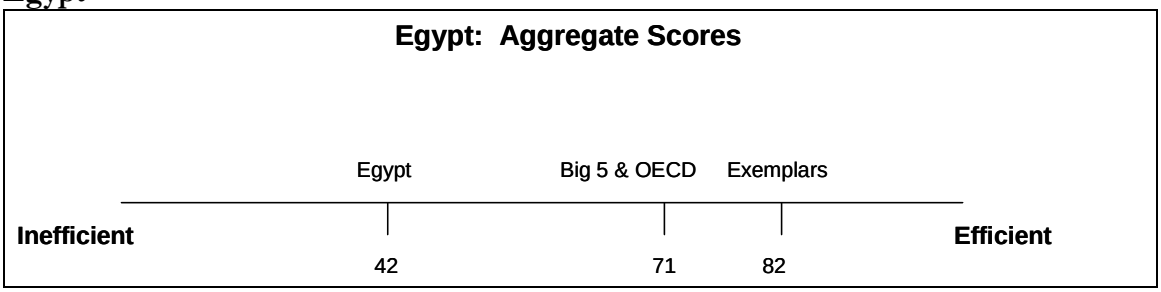
Croatia



Highlights: Croatia's trade openness was its best score overall, while its infrastructure received the lowest score. Croatia's physical infrastructure (e.g. paved roads) is better than its utilities (electrical production per capita is about 37 percent of that in the benchmark countries). In communication infrastructure, broadband subscription in Croatia is quite low (20 persons out of every 1,000). Though

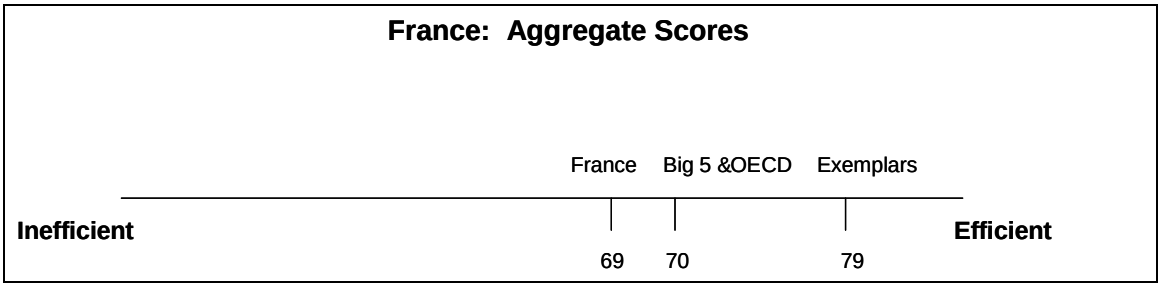
mobile telephony is nearly as common as in most benchmark countries, there are dramatically fewer PCs (190 versus 688 in the Exemplars) per 1,000 people.

Egypt



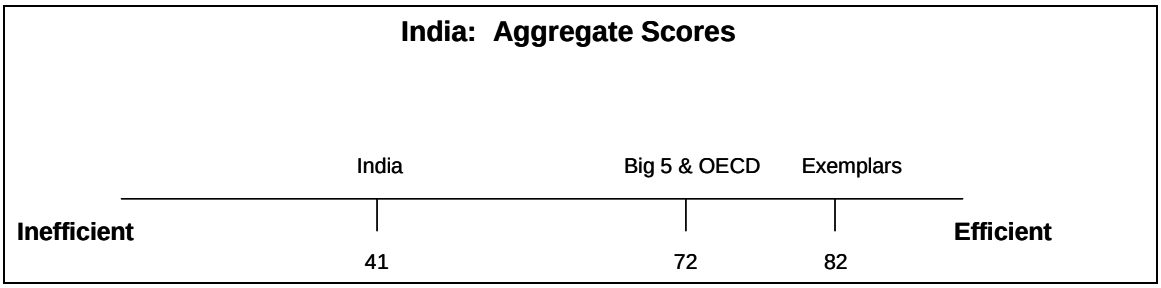
Highlights: Egypt's score was extremely low overall. Its practices for efficient international trade score was particularly poor, even though this was its highest score in the survey. Infrastructure problems include more than a week annually of water supply failures and only 28 secure Internet servers per 1 million people. Electricity production per capita was about one-eighth that of the Exemplars. Egypt invests only 1 percent of GDP on IT, while the benchmark countries spend around 6 to 7 percent. Egypt's costs to import and export containers were several hundred dollars more than in the benchmarks, but Egypt requires 8 documents for imports, only slightly higher than the benchmarks. Egypt is slow in clearing air cargo (14 days contrasted with 1.5 in the Exemplar countries). For its legal systems, human capital, financial capabilities, and trade openness, Egypt scored below average. It takes 193 days to register property in Egypt, and an average of 40 weeks to resolve a dispute in court. Thirty percent of Egypt's workforce remains in agriculture, and infant mortality is seven times higher than in the Exemplars. For financial services, 26 percent of all loans are non-performing, and business start-up costs are substantially higher than in the benchmark countries.

France



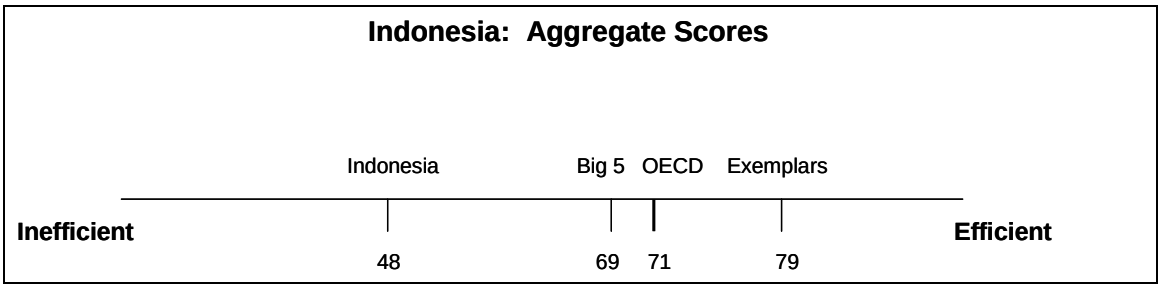
Highlights: France scored well in human capital, best practices for efficient international trade, and infrastructure. France spends more on public education as a percentage of GDP (6.1 percent) than the benchmarks and has a strong secondary school enrollment rate. However, taxes on the average worker (as a percentage of labor cost) were about 50 percent, considerably higher than in the benchmark countries (about 35 percent). In trade efficiencies, France excelled on the measures of speed at clearing goods through the border. The associated costs of importing and exporting goods were slightly higher than the benchmarks, and more documentation was required in France than in our best practice countries. France showed strong technology usage, particularly for broadband and business Internet usage. Slow, cumbersome procedures to register property lowered France's score.

India



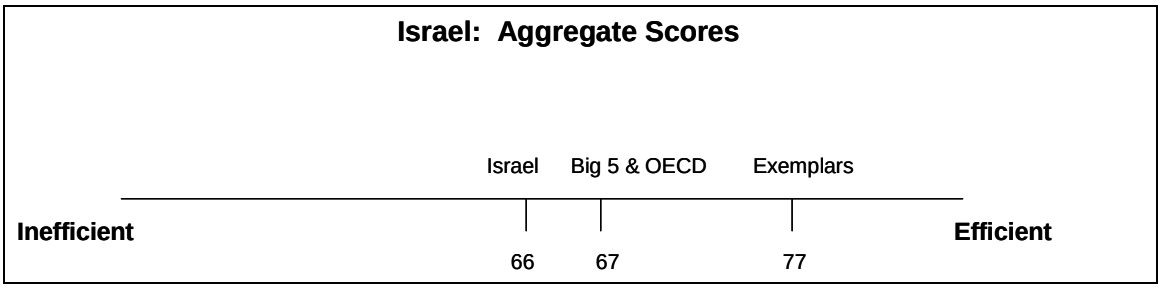
Highlights: India's scores were low overall. India's weakest scores were infrastructure and best practices for efficient international trade. Its scores in the other sections were also well below the benchmarks. Less than half of all roads in India are paved. The broadband subscriber rate is extremely low, with only 1 in 1,000 having access. Air cargo takes more than 10 days to clear customs, and it takes more than 40 days to import a good. India requires 15 different documents to import a good, while the Exemplars require 4 or 5. The cost to import a container in India is $1,244, while the cost to import a container is $670 for the Exemplars. In the openness metrics, India's average tariff level of more than 19 percent suggests protectionism when compared against benchmark tariff levels ranging from five to six percent. Contracts took a staggering 1,400 days to enforce, contrasted with a benchmark score of 237 days, and surveys also report that the level of bribery associated with securing a contract is substantial.

Indonesia



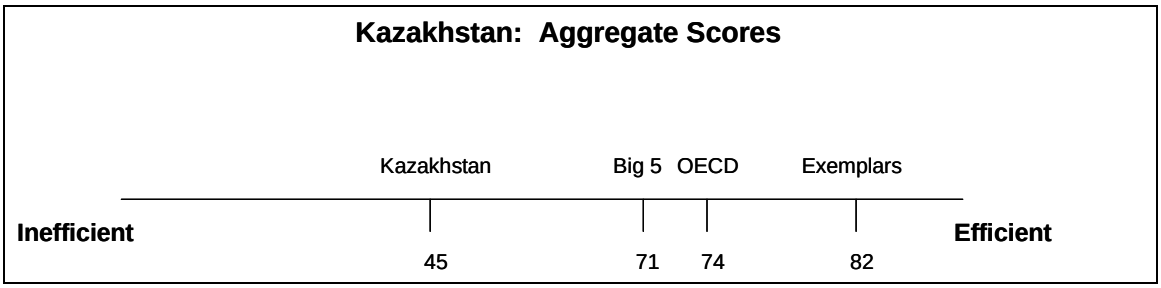
Highlights: Indonesia's weakest scores were in infrastructure and human capital. Its strengths were in best practices for trade and finance. Indonesia has only 14 personal computers per 1,000 people; the Exemplar countries have nearly 700 per 1,000. Electrical production per capita in Indonesia is 526 kilowatts, compared with more than 8,600 kilowatts for the average OECD member. Forty-six percent of Indonesians work in agriculture. Only 6 percent of patent applications are domestic. On the positive side, Indonesia has a young population, and expenditure on education (as a percentage of GDP) is increasingly comparable to the benchmark countries. In trade efficiencies, the costs for importing and exporting are low in Indonesia. Container costs are $546 to export and $675 to import. Air and sea cargo take 3 days to clear customs in Indonesia, only slightly longer than in the benchmark countries. Indonesia has a competitive rate of business taxation. Total taxation payable by businesses is 48 percent in the OECD, but only 37 percent in Indonesia. Indonesia's legal system is generally supportive of business needs (for example, procedures to build a warehouse were as streamlined as in the benchmark countries), but starting a new business in Indonesia takes longer than it does in the best performers.

Israel



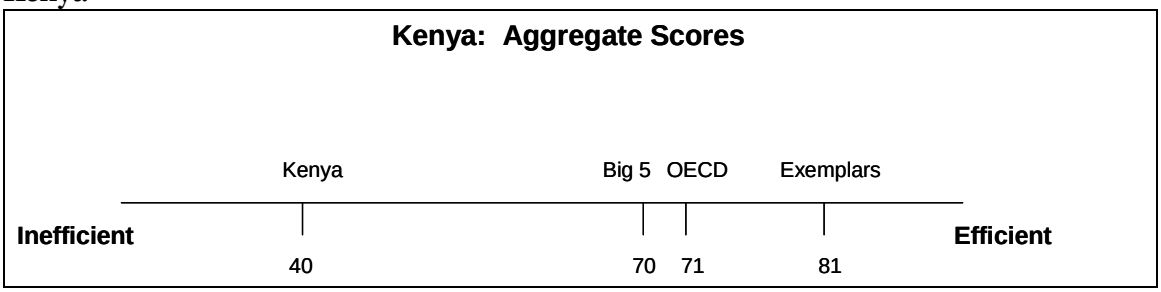
Highlights: Israel obtained its highest scores in best practices for international trade and human capital. However, Israel's legal and enforcement systems pulled down its overall score. Israel moves air and sea cargo through customs in just 1 day, faster than all of the benchmark group averages. The cost to export a container ($340) is also well below that of the benchmark countries. Though import costs are higher ($700 per container), they are comparable to the benchmarks, and document requirements (only 5 separate documents to export or import) are quite reasonable. In human capital, Israel has a high secondary school enrollment rate (92 percent) and literacy rate (97 percent), and spending on public education is 7.5 percent of GDP (higher than the benchmarks). Hiring costs as a percentage of salary in Israel are only 5.9 percent, compared with 21 percent in OECD countries. Unsurprisingly, Israel rated as having a higher level of violence and terrorism than the benchmark countries. In addition, registering property was unduly slow at 144 days, which further hurt Israel's legal systems score. Similarly, the time required to enforce a contract averaged 585 days, more than twice the time taken in the Exemplar countries. It takes 34 days on average to start up a business in Israel, as opposed to 13 days for the Exemplars.

Kazakhstan



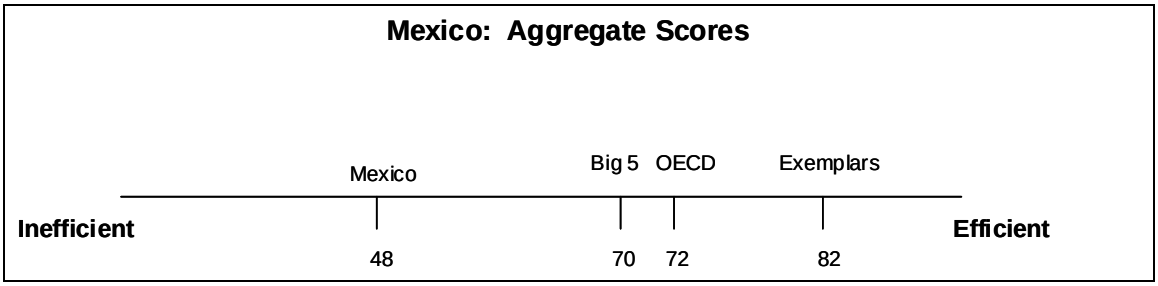
Highlights: Kazakhstan rated as both slow and expensive for trade. It takes an average of 93 days to export a good from Kazakhstan, while the Exemplars accomplish the task in less than a week. The costs associated with importing and exporting are considerably higher in Kazakhstan. The per-container cost to export from Kazakhstan is $2,780 (the top five traders' average is $631). The per-container cost to import into the country is $2,880 (compared to $670 for the Big 5). Kazakhstan requires 18 documents for importing, further worsening the inefficiency of its border process. In infrastructure, Kazakhstan demonstrated several weaknesses. Human capital, however, was one of the country's strongest areas. Kazakhstan scored well on school enrollment rates, literacy, and hospital beds (a public health proxy). Spending on public education (7.4 percent of GDP) surpassed the benchmark groups' average rate of about 5 percent. Kazakhstan's legal system demonstrated some benefits for businesses. The time required to enforce a contract (183 days) is substantially shorter than even the best benchmark (237 days). Another indicator found that government officials interpreted regulations affecting businesses in a fairly consistent and predictable manner.

Kenya



Highlights: Kenya's weak infrastructure affected its total score. Kenya scored the lowest of all the sample countries in infrastructure. From utilities to roads to Internet backbone, Kenya scored only a fraction of the benchmarks' score. Only 14 percent of all roads in Kenya are paved. Kenya generates only 154 kilowatts of electricity per capita, compared with more than 8,600 kilowatts in the average OECD country. Kenya experiences 85 days of water supply failure annually, contrasted with just a few hours in the OECD. Kenya spends only 3 percent of GDP on IT, less than half of what the benchmarks typically spend. Openness to trade suffered from an average tariff rate in Kenya of almost 13 percent. Kenya also has a large black market for foreign exchange (considered a non-tariff barrier to trade). In trade efficiencies, Kenya rated as both slow and expensive at its borders. The cost to import a container is $2,325, nearly three times the Exemplar average. Kenya has major public health issues, as indicated by its infant mortality rate (10 times the OECD's) and life expectancy (55 years). Kenya's stated spending on public education is higher as a percentage of GDP than the benchmarks, but less than half of all eligible students are enrolled in secondary schools. Kenya was slower than the benchmarks in conducting legal processes needed by businesses, but also demonstrated substantial corruption by government officials. One bright spot is that its taxation process was comparatively streamlined.

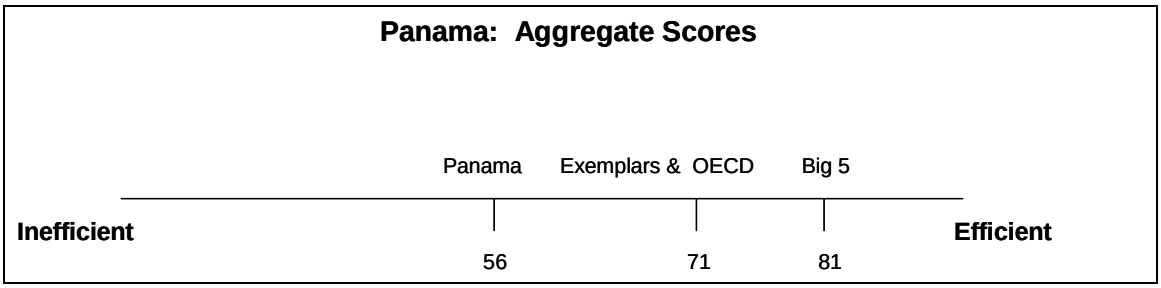
Mexico



Highlights: Mexico's physical infrastructure needs to be improved. Only 50 percent of roads are paved, and other deficiencies, including a high number of water supply failures, led to a poor overall infrastructure score. Investment in IT also lags. The government spends only 3 percent of GDP on information technology, while the benchmarks spend 6 to 7 percent. Only 9 percent of Mexican households have Internet access, compared with 64 percent of homes in the Exemplar countries. Mexico also produces only a quarter of the electricity per capita that is produced in the average OECD country. Business start-up costs in Mexico are high, and businesses must make 49 separate tax payments annually (compared to 15 payments in the Exemplar countries). It takes more than three times as many hours to pay business taxes (552 hours on average) than in the Exemplars. Mexico's spending on public education is comparable to the benchmarks as a percent of GDP. Mexico has labor advantages, including a comparatively young workforce and lower than average taxes - in the

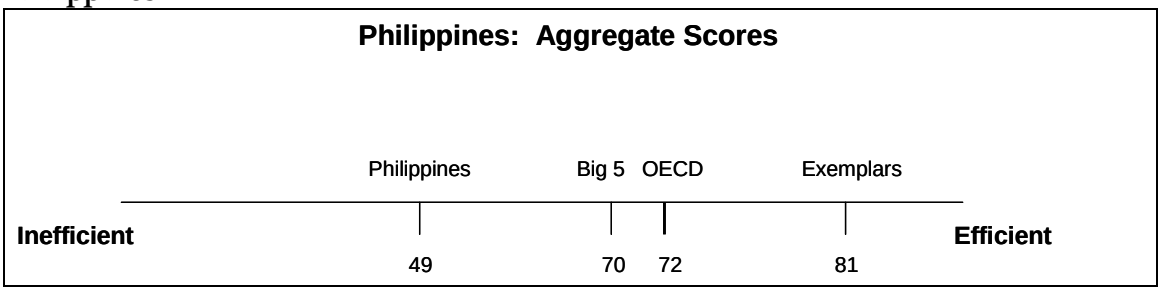
OECD, taxes on the average worker as a percent of labor costs are 37 percent, but in Mexico, they amount to 18 percent. In trade efficiencies, Mexico compared well on speed at the border in moving goods, but not on keeping costs low. The per-container cost to import in Mexico is $2,152, far higher than the $670 to $883 price range found among the benchmarks.

Panama



Highlights: Panama scored weakest in infrastructure. Electrical production per capita in Panama is around 2,300 kilowatts, while in the average OECD country it is 8,600. Panama experiences about 45 days of water supply failures a year. In IT infrastructure, Panama had only five broadband subscribers per 1,000 people, despite spending 8 percent of GDP on IT investments. In openness to trade, Panama scored above the sample country average. Illustrating openness to trade, Panama's ratio of imports and exports to GDP is more than 100 percent, similar to that of the Exemplars. About 19 percent of Panamanian firms export directly, comparable to the OECD average. Panama's average tariff rate of 7 percent is only marginally higher than the benchmarks. In trade efficiencies, Panama is slightly slower and slightly more expensive than the benchmarks. Panama's average clearance times are several days longer than the benchmarks, and its per-container costs for importing and exporting are about $100 more than the OECD countries. Panama's legal system supports business operations in a number of ways. The time required to build a warehouse was 121 days, shorter than in the OECD (150 days). Firms operating in Panama perceive government officials to be consistent in their application of regulations. However, enforcing contracts in Panama is considerably slower than in the benchmarks. Panama's human capital performance showed that its government spends more on education (8.8 percent of GDP) than the benchmarks. However, there are only 387 technicians in R&D per million people, while in the Exemplar countries that figure is over 1,100.

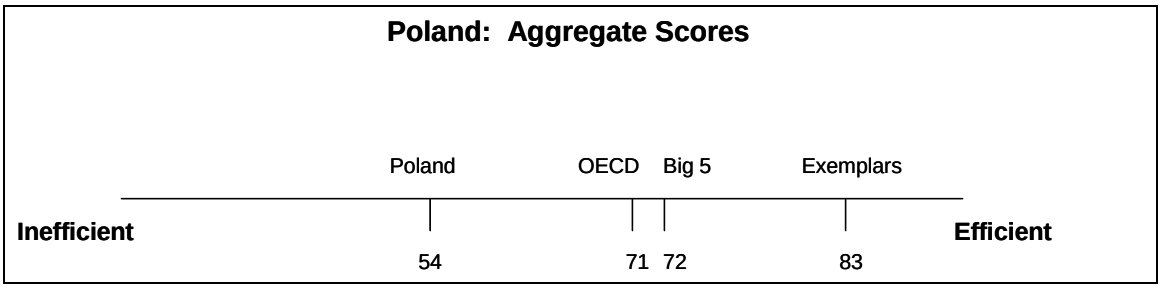
Philippines



Highlights: Only 22 percent of roads are paved in the Philippines, and electrical production per capita is a mere 621 kilowatts. The Philippines has almost 10 full days of water outages annually, and only 45 people in 1,000 have PCs. There are only three secure Internet servers in the Philippines per one million people, while in the benchmark countries that figure is typically 350 to about 400. The Philippines' investment in IT, however, is comparable as a percent of GDP to our benchmarks. In

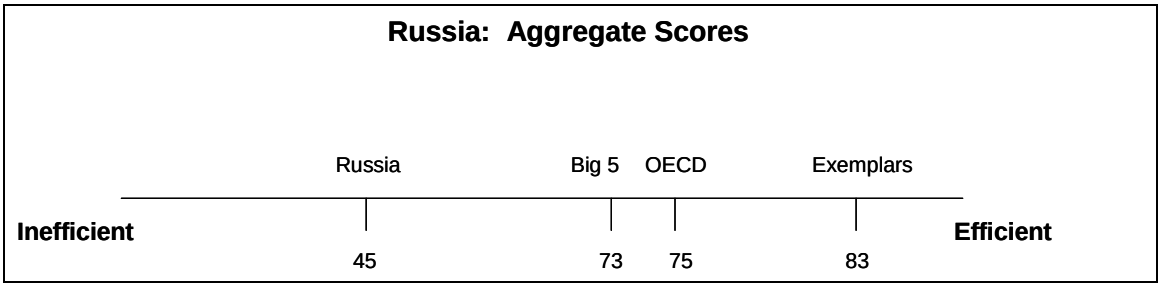
trade efficiencies, the Philippines scored much better than it did in infrastructure. The Philippines was relatively swift at moving goods across borders. Clearance times were only marginally longer than the benchmarks in most cases. In human capital, though the Philippines has an 85 percent enrollment rate in secondary school, spending on public education is only 3 percent of GDP. Only 5 percent of patent applications originate from domestic firms. On the positive side, hiring cost as a percentage of salary is low in the Philippines (8.5 percent, as compared to 21 percent for the OECD).

Poland



Highlights: Poland's clearance of goods through customs is nearly as swift as the benchmarks, and Poland's procedures for importing and exporting are as streamlined as the best benchmark countries. However, Poland's costs for importing and exporting are significantly higher. Importing or exporting a container costs $2,260, while in many of the benchmarks it costs $600 to $800. Physical infrastructure (rail, road, and air) and utilities appear strong, but IT infrastructure lagged behind the benchmarks. Only 26 percent of households in Poland have Internet access, and Poland invests only 4 percent of GDP into IT, compared with about 7 percent for the benchmarks. The time required to register property and to enforce a contract is several times what it is in the Exemplar countries. Perceptions of corruption also lowered Poland's score.

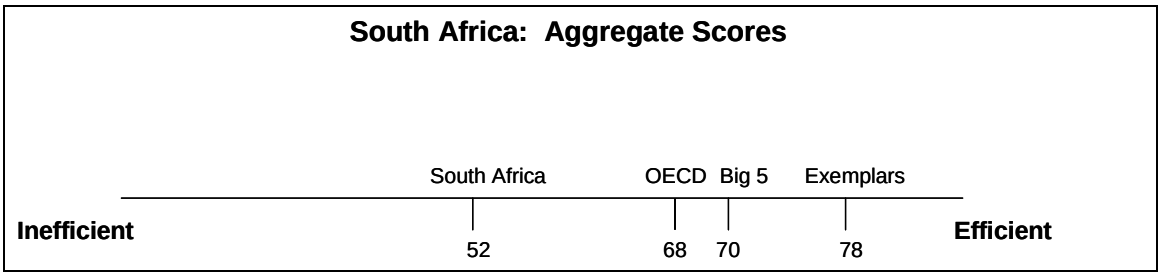
Russia



Highlights: Human capital was Russia's strong point; trade efficiency and infrastructure were its most prominent weaknesses. Russia has a substantial number of educated workers. There are 557 technicians per one million Russians working in R&D, less than the 800 per million working in the top five trading countries, but significant nonetheless. Russia reports a secondary school enrollment rate of 92 percent, and three-quarters of patent applicants in Russia are domestic companies. However, 11 percent of the Russian population still works in agriculture. Russia scored as slow and expensive in the movement of goods across its borders. The per-container cost for importing and exporting is $2,237, several times higher than in the benchmarks. It takes nearly 40 days to import or export goods in Russia. Russia's air and rail infrastructure did not measure up well against the benchmarks. Utility infrastructure, however, seemed more competitive. Water supply failures were slightly more common than in the OECD, but electrical production per capita was relatively similar to the benchmarks.

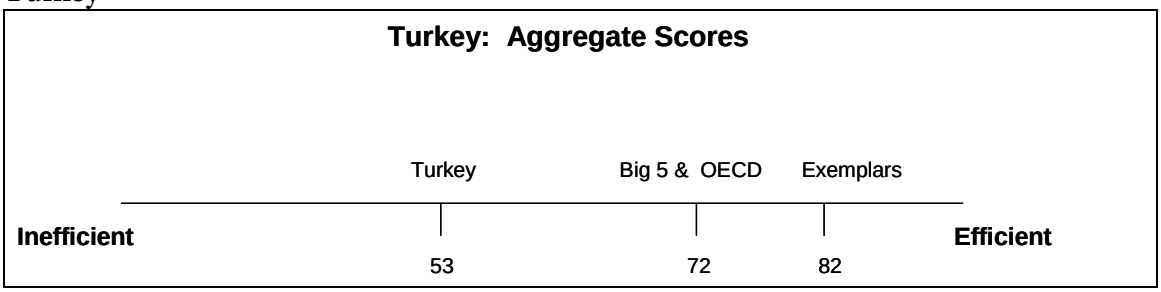
Russia's IT infrastructure lags behind the benchmarks. Only 11 Russians in 1,000 have broadband, and there are only two secure Internet servers per million people (300 to 400 in the benchmark countries). Russia appears to under-invest in IT, spending only 4 percent of GDP.

South Africa



Highlights: South Africa's best scores were in financial and legal systems. Its weakest scores were infrastructure and human capital. Total taxes payable by businesses as a percentage of profits were 38 percent, lower than the OECD average (48 percent). Businesses must make 23 separate filings of tax payments annually, comparable to the requirements in the benchmark countries. South Africa's banking sector is relatively efficient, and only 1.8 percent of all loans in South Africa are non-performing, comparable to the benchmarks. The number of hours required to pay business taxes (351) is similar to the top five traders, but not as competitive as the Exemplars (153 hours). South Africa's legal systems appear to work relatively well for businesses. Court disputes are settled faster than in many benchmark countries, and it takes only 23 days to register property. The enforcement of contracts, however, is slower than in the benchmarks, and South Africa ranks as less transparent than most of the benchmark countries. Many basic indicators of human capital, such as the infant mortality rate, fell below the benchmarks. Despite spending on public education at a comparable level to many of the benchmarks (around 5 percent of GDP), the literacy rate is only about 80 percent. South Africa's hiring costs as a percent of salary are only 2 percent, compared with 21 percent in the OECD.

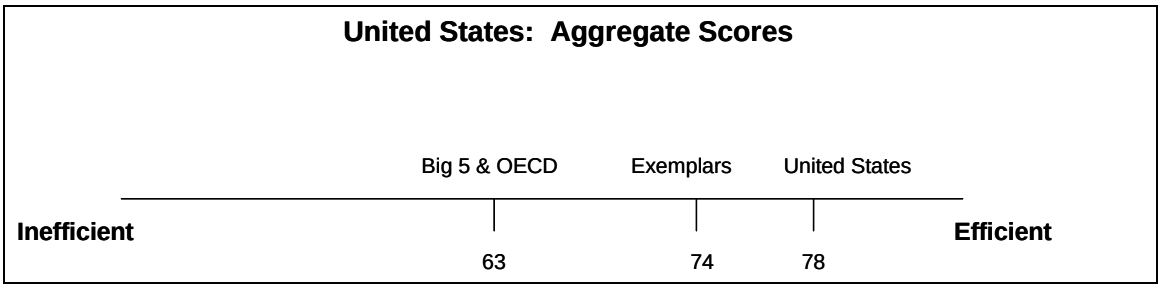
Turkey



Highlights: Turkey requires greater investments in both IT and physical infrastructure. Only 42 percent of Turkish roads are paved. Only 7 percent of Turkish households have Internet access, and there are only 22 broadband subscribers per 1,000 Turks. Turkey's financial systems also demonstrated some weaknesses. The long-term interest rate in Turkey is 18 percent, while in the benchmarks it is around 3 percent. Business start-up procedures are considerably higher than the benchmarks as well. Turkey rated as cheap and relatively fast at moving goods. The costs of exporting and importing containers of goods are $513 and $735 dollars respectively, both lower than most benchmark countries. Turkey, however, requires more documentation for importing and

exporting than do benchmark countries, but Turkey's performance in this score was still quite solid. Turkey's legal system serves businesses adequately, if somewhat slowly. For example, there are only 8 procedures required in Turkey to start up a new business. Businesses in Turkey report that officials apply laws and regulations with a fair measure of consistency. However, other metrics suggest that bribery and a lack of transparency continue to be problems.

United States



Highlights: The U.S. could increase its already high score by reducing protectionist trade policies and by speeding trans-border commerce. The United States has strong transportation infrastructure based on a vast network of roads, aircraft and railways. The U.S. produces more electricity per capita than nearly all other countries. The U.S. is not the global leader in broadband deployment, but business use of information technology is extremely high. Moreover, the U.S. investment in IT surpasses that of the benchmarks. The United States benefits from immigration to strengthen the talent levels in its workforce. More than 12 percent of residents with graduate degrees are foreign-born. The U.S. has a high secondary school enrollment rate and low hiring costs. Trade openness ranked lower for the U.S. because of anti-dumping and other protectionist measures. The U.S. has also been involved in a large number of WTO disputes, a metric used as a proxy for opposition to openness in trade. In trade efficiency, the U.S. is not overly expensive to move goods into or out of, but delays did adversely affect the results. In the U.S., the average custom clearance time for air cargo was 5 days, while for the Exemplars clearance took 1½ days. Even worse delays can be found in the U.S. clearance process for sea cargo (15 days as opposed to about 2 days in the Exemplar countries).

Methodology

We used credible third party data to provide metrics with which to measure each of the six scores. In general, we preferred multinational institutions' data when possible. However, in some cases benchmark data was gathered directly from national statistical agencies. The following are the major sources for the data:

- World Bank
  - Development Indicators
  - Financial Indicators (IFC, private sector)
  - Doing Business
  - IFC Enterprise Survey
  - Knowledge for Development
- OECD
  - STAN Bilateral Trade Database

    - Factbook
- World Trade Organization
    - Country trade profiles
- United Nations
    - UNCTAD/WTO International Trade Center
- Transparency International
- International Exhibition Logistics Associates
- Others
    - Nationmaster
    - CIA World Factbook
    - Government agencies/ministries and academic studies

The metrics are meant to be comparative and relate to variation in policy (and variation in outcomes that can be affected by policy) and not – to the extent that it can be avoided –variation in GDP, population, territory size, or other outside factors. Some specific questions have been divided by these factors in order to drop out these differences and focus on the differences that are relevant to government policy action (or inaction).

For each question, the data used is from the latest available year.