World
DB14 - Case Studies
Understanding Regulations for Small and Medium-Size Entreprises

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Minimum capital requirements significantly slow entrepreneurship. Such requirements also fail to serve their intended purpose of protecting consumers and creditors from hastily established and potentially insolvent firms. In recent years many governments have stopped requiring new businesses to deposit minimum capital in banks or with notaries before they can begin operations.

What is a minimum capital requirement? It is the share capital that must be deposited by shareholders before starting business operations. For the Doing Business starting a business indicator the paid-in minimum capital is usually the amount that an entrepreneur needs to deposit in a commercial bank or with a notary when, or shortly after, incorporating a business, even if the deposited amount can be withdrawn soon after a company is created. In most cases this required amount is specified in an economy’s commercial code or company law. Research shows that the existence of a minimum capital requirement directly hinders business development and growth.

Of the 189 economies studied in Doing Business 2014, 99 have no minimum capital requirements. Some economies never required firms to deposit money for incorporation, while 39 have eliminated minimum capital requirements in the past seven years. Armenia, Belarus, Bulgaria, Denmark, Kosovo, the Republic of Korea, the Kyrgyz Republic and the United Kingdom are among these economies that have cut or eliminated such requirements. For instance, Belarus halved its minimum capital requirement for private limited liability companies in 2008, then abolished it a year later. In 2009 Bulgaria reduced its minimum capital requirement by 99%, to less than $2. That same year, Denmark slashed its minimum capital requirement for limited liability companies from about $22,000 to about $14,000. All of these changes lower the costs to entrepreneurs to operate in the formal sector. The other 90 economies still require entrepreneurs to deposit capital before registering a business. This amount varies greatly—from €1 in Germany to more than $58,000 in Myanmar.

WHERE IS THE MINIMUM CAPITAL REQUIREMENT MORE PREVALENT?

Across regions, minimum capital requirements are lowest in Europe and Central Asia, Latin America and the Caribbean and OECD high-income economies (figure 4.1). In Latin America and the Caribbean only 10 of 32 economies require new businesses to deposit minimum capital, with the Dominican Republic imposing the most—almost half of income per capita, or about $2,500. Still, most of the 10 economies that had enforced capital requirements keep them low. In Suriname it is about $30—0.4 percent of income per capita—and in Bolivia it is $40, equivalent to 1.8 percent of income per capita. And in the past 10 years other economies in the region, such as Mexico, St. Kitts and Nevis, and Uruguay, have eliminated minimum capital requirements altogether.

Among OECD high-income economies, Austria and Slovenia have the highest minimum capital requirements, asking entrepreneurs to commit more than 40% of gross national income per capita. In Sub-Saharan Africa 13 economies have minimum capital requirements exceeding 200% of income per capita. An extreme example is Niger, where the minimum capital requirement is about 400% of income per capita.
capital requirement is equivalent to 528% of income per capita—about $2,000.

Globally, except in South Asia, minimum capital requirements have been cut over the past seven years. The biggest changes have occurred in the Middle East and North Africa, where the share of economies with minimum capital requirements of less than 5% of income per capita fell from over 60% in 2006 to 6% in 2013 (figure 4.2). In 2011 Jordan reduced its minimum capital requirement from about $14,000 to less than $2. Similarly, in 2013, Morocco eliminated its minimum capital requirement for limited liability companies. Many economies in Europe and Central Asia and the OECD high-income region have also sharply cut or eliminated minimum capital requirements.

In South Asia only India and Maldives still have minimum capital requirements. In India it is about $1,900; in Maldives, $135. In general, South Asia is lagging behind on business entry regulatory reforms compared with other regions. For instance, in 2012/13, Sri Lanka was the only economy of 8 in those studied that simplified business registration—compared with 10 of 21 in Europe and Central Asia.

Minimum capital requirements are relatively higher in low-income economies than in lower-middle, upper-middle and high-income ones. Among high-income economies, 25% have a minimum capital requirement ranging from 1.5% to 230% of income per capita—from about $1,500 in Malta to more than $50,000 in Bahrain. Bahrain and Oman require new limited liability companies to deposit the equivalent of more than 200% of income per capita in bank accounts to complete registration and commence business operations.

Of the 34 low-income economies studied, 18 do not have minimum capital requirements. Among the other 16, 11 are members of the Organization for the Harmonization of Business Law in Africa, which has fixed the minimum capital requirement at about $2,000.

**DO MINIMUM CAPITAL REQUIREMENTS FULFILL THEIR REGULATORY FUNCTIONS?**

The minimum capital requirement finds its roots in continental Europe of the 20th century. Back then, the minimum paid-up capital was stipulated by law and its primary legislative purpose was to protect creditors and nurture confidence in financial markets. Nowadays, despite the financial burden that minimum capital requirements impose on potential entrepreneurs, some argue that they protect investors and consumers from new firms that are set up carelessly, might not be financially viable and will likely close soon after launching. Advocates of this argument claim that minimum capital requirements enable prospective investors to consider investments more cautiously.

But this regulatory fix does not adequately address the problem. Paid-in minimum capital is often a fixed amount that does not take into account firms’ economic activities, size or risks. In some cases it is the same for different types of companies as well. For instance, a small company...
in the services industry with low start-up capital has to pay as much as a large manufacturing company with high initial capital in Gabon, despite the difference in business activity and size. Moreover, funds tied up in minimum capital requirements, particularly in economies where the amount is sizable, could impose financial constraints on companies that have other needs, such as hiring, buying equipment or developing services.8

Others argue that minimum capital requirements shield firms from insolvency and so protect creditors and investors.9 But lenders tend to base their decisions on commercial risks rather than government-imposed minimum capital requirements.10 Creditors usually prefer to evaluate firms’ income statements, business plans and other representative indicators. Thus, many economies have found other ways to protect investors, particularly with limited liability companies. For instance, Hong Kong SAR, China outlines solvency safeguards in its Companies Act and does not require a specific amount of paid-in minimum capital for business incorporations. Furthermore, companies have different probabilities of becoming insolvent. Even with a minimum capital requirement there is no guarantee that a firm would not face insolvency because of other factors such as poor management and decision making, bad business conditions and market changes.31

If the enforced minimum capital requirement is too high, it might impede the development of start-ups. It could block potential entrepreneurs seeking to start businesses as alternatives to unemployment.32 In Ethiopia the official unemployment figure is more than 20%, yet the minimum capital requirement is 184% of income per capita. Though the minimum capital requirement alone does not account for Ethiopia’s high unemployment, it does hamper the development of small and medium-size formal businesses that might be a source of employment.13

Some researchers also argue that high minimum capital requirements distort healthy competition by putting at disadvantage entrepreneurs with less financial capacity.14 A firm is expected to use its financial resources to establish the business and day-to-day operations. So freezing capital in a bank account may undermine a company’s growth. In Bolivia and Ghana minimum capital can be withdrawn in full only after a company’s dissolution. Moreover, high minimum capital requirements can enable fraudulent activities that are supposed to prevent. Entrepreneurs eager to incorporate companies but lacking the required funds, often falsify company incorporation forms or withdraw funds soon after incorporation.15

If the capital requirement is too low, it fails to screen out potentially unviable businesses. A low requirement does little to protect creditors if a company undergoes financial distress.16 In many economies the requirement is merely symbolic because governments and company registries cannot predetermine how much money might be needed to cover companies’ liabilities if they become insolvent.17 For example, France, Germany, Japan and Jordan have minimum capital requirements of less than $5. In addition, a minimum capital requirement does not limit company debt because once the capital amount has been established, there are usually no limits on the borrowing of companies.18

Minimum capital requirements are especially futile if funds can be withdrawn and possibly used to cover expenses unrelated to the business soon after a company is incorporated. For instance, in Estonia, Luxembourg and Thailand entrepreneurs can withdraw start-up capital immediately after incorporating a business—so minimum capital requirements provide no security to potential creditors.19

A better way to make markets more efficient and protect creditors would be to enforce mandatory disclosure of information, such as mandatory filing of annual financial accounts in company registries and enhancing the supervisory role of company registries. Other forms of creditor protection already exist in many economies, including corporate governance monitoring, setting of interest rates and contractual provisions such as bond indentures and loan agreements.20 The United States, for instance, once imposed significant requirements on how much capital had to be contributed and maintained in a corporation. But those rules have lost virtually all of their value for stockholders and creditors because better approaches have been developed. Today creditors must rely primarily on negotiated contractual protections, as stipulated in statutory and incorporation agreements.21

A study of 5 EU economies shows that eliminating minimum capital requirements makes it easier to start small and medium-size enterprises. The number of registered businesses has increased in 4 of the economies studied that have lowered or abolished minimum capital requirements (France, Germany, Hungary and Poland). Research also shows that, in addition to significantly increasing the total number of limited liability companies, such legal reforms have raised the number of new firms created.22

Another study on the effects of deregulation of corporate laws on company incorporation shows that entrepreneurs have taken advantage of recent rulings by the European Court of Justice allowing them to select the economy where they incorporate regardless of their initial location. For instance, cross-country incorporation from businesses in other EU economies increased significantly in the United Kingdom, driven by low capital requirements and start-up costs.23

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### WHAT IS THE ECONOMIC RELEVANCE OF MINIMUM CAPITAL REQUIREMENTS?

Through the analysis of minimum capital requirements it is possible to identify 2 main types of correlations: one relating minimum capital requirements to other types of regulations and another relating minimum capital requirements with economic outcomes, such as the size of the informal economy. All the results presented here are based on correlations and cannot be interpreted as causal.

The analysis shows that minimum capital requirements are related to 2 types of regulations: insolvency laws and its implementation and minority shareholder protection. The efficiency of insolvency laws is measured by the Doing Business recovery rate indicator. The regression analysis suggests that minimum capital...
requirements might not help creditors recover their investments. There is a strong negative association between such requirements as measured as a percentage of an economy’s income per capita and the recovery rate of creditors. The recovery rate for investors tends to be higher in economies that do not have minimum capital requirements. So, indeed, such requirements do not play a crucial role in safeguarding creditors against company bankruptcies.

The negative correlation between minimum capital requirements and the strength of investor protection index (which measures legally required minority shareholder protections provided by law) is also significant (figure 4.3). Economies that do not have minimum capital requirements or set them very low tend to better protect investors by being more likely to promote transparency in corporate transactions, provide easy access to corporate information and have stricter director liability standards.

With regards to economic outcomes, the analysis shows that in economies with high minimum capital requirements, small and medium-size firms have less access to bank financing. The analysis also reveals a strong correlation between the amount of minimum capital required and the percentage of small and medium-size enterprises that cite access to finance as a major constraint to their business operations (figure 4.4).

Furthermore, there is a strong positive association between minimum capital requirements and the percentage of firms in economies who say that the informal economy severely constrains their growth (figure 4.5). If entry costs are prohibitively high, entrepreneurs might be disinclined to formalize their businesses. There is also a strong negative relationship between the number of years that firms operate without formal registration and the burden of minimum capital requirements. Based on this relationship, higher minimum capital requirements are associated with longer periods when firms operate without formal licenses. The less money that firms have to spend on minimum capital requirements, the less likely they are to compete against informal businesses as
those firms have a greater incentive to become formally registered.

There is also a strong negative association between minimum capital requirements and the number of new formal businesses: This result supports the argument that minimum capital requirements deter entrepreneurial activity, creating obstacles for business development.

**CONCLUSION**

Despite its shortcomings, minimum capital requirements remain a reality for many economies, especially in the Middle East and North Africa and Sub-Saharan Africa. But every year more economies slash or eliminate how much money entrepreneurs must deposit to start businesses. Governments can take various other steps to protect investors and creditors, minimize risks of bankruptcy and safeguard consumers from potentially hazardous products.

**NOTES**

This case study was written by Valentina Saltane and Paula Garcia Serna.

1. van Stel, Storey and Thurik (2007); Blanchflower, Oswald and Stutzer (2001); Klapper and Love (2011); Dreher and Gassebner (2011).

2. The paid-in minimum capital measured by the starting a business indicator represents the amount an entrepreneur needs to deposit within 3 months of business incorporation. In the following sections it is referred to as minimum capital.

3. For instance, in Belgium the required minimum capital is defined in the Company Code, in Ecuador in the Companies Act and in Togo in the Organisation pour l’Harmonisation en Afrique du Droit des Affaires (OHADA) Uniform Act on the General Commercial Law.


5. Belarus, Bulgaria, Kazakhstan, Kosovo, Lithuania, FYR Macedonia, Romania, Serbia, Ukraine and Uzbekistan.

6. OHADA members are Benin, Burkina Faso, Cameroon, the Central African Republic, Chad, the Comoros, the Republic of Congo, Côte d’Ivoire, the Democratic Republic of Congo, Gabon, Guinea, Guinea-Bissau, Mali, Niger, Senegal and Togo.


24. The results are significant at the 5% level after controlling for income per capita.

25. The strength of the investor protection index is the average of the extent of the disclosure index, the extent of the director liability index and the ease of the shareholder suits index. The index ranges from 0 to 10, with higher values indicating more investor protection.

26. The results are significant at the 5% level after controlling for income per capita.

27. The results are significant at the 5% level after controlling for income per capita.

28. The results are significant at the 5% level after controlling for income per capita.

29. The results are significant at the 5% level after controlling for income per capita.
Construction accounts for a large share of GDP in most economies. In 2005, during a period of high growth, it was the source of at least 7% of GDP in Bangladesh, India and the United Arab Emirates. Governments often use construction to stimulate economic activity because of its benefits for people across socioeconomic strata. From New York to Shanghai, economies are competing to build the tallest, biggest, most beautiful buildings.

Ensuring safety in construction is not easy. A single structural failure can cause an entire building to collapse, often leading to injuries and deaths. The collapse of the Kihonge high-rise in Kenya in 2006, a multistory Melcom department store in Ghana in 2012 and the Rana Plaza Building—a multiuse building including a garment factory—in Bangladesh in 2013 show that strong regulation for building construction and equally strong enforcement of the law are essential for worker and public safety. Furthermore, the monetary costs incurred by governments or private sector to replace the buildings or fix the damages can be substantial. These incidents do not imply that these countries do not officially require inspections. Ghana’s Building Inspectorate is legally required to inspect buildings at 4 stages before the official final inspection. Similarly, Bangladesh’s City Development Authority is supposed to conduct excavation and foundation inspections before conducting a final inspection. But such inspection requirements do not do enough to guarantee worker and public safety.

Inspections during the construction of buildings are crucial—but assessing potential risks might be even more important. For example, several factors must be taken into account when building a power plant, such as the pollution it is expected to emit, which will affect how thoroughly it needs to be inspected. Accordingly, there has been growing consensus in the construction industry on the need for supervisory bodies to consider the potential risks imposed by a building, rather than applying the same inspections standards to all buildings. Many economies are adopting innovative approaches to construction controls, with the focus shifting from random, systematic and untargeted inspections to more targeted, selective and risk-based inspections.

Both developed and developing economies have implemented risk-based inspections, which take into account the varying risks for different types of buildings. Since 2005, 18 economies have incorporated elements of risk-based inspection systems. For example, Germany adopted a system similar to Australia’s that makes private inspectors responsible for ensuring buildings’ safety and thus responsible for conducting the required inspections based on the type of building.

Over the past three decades other governments have also worked with the private sector to develop risk-based inspections, resulting in new laws and regulations that make safety a central focus of the construction industry while maintaining efficiency. Risk-based inspections, as opposed to random, untargeted inspections, allow governments to allocate resources where they are most needed without compromising worker and public safety. But their effectiveness depends on several factors, including strong oversight, proper enforcement of legislation, sufficient resources and technical expertise.

Economies require inspectors to inspect buildings to ensure that builders comply...
with legal requirements for worker safety (construction inspections), structural integrity (building inspections) and fire safety. There can be too few inspections or too many; neither approach benefits the construction industry or the public interest.

In some economies obtaining a construction permit requires dozens of procedures. It can take more than a year to comply with these, and they can cost several times annual income per capita. Moreover, the process is often little more than a way to extract rents and so is associated with corruption. In contrast, countries such as France, New Zealand and the United Kingdom have created permit procedures that strike a much better balance, ensuring high levels of public safety while not burdening the private sector with excessive red tape. Builders in such economies are creating simpler structures that are generally subject to less requirements and inspections due to their lower risks.

**WHAT TYPES OF INSPECTIONS ARE THERE?**

Unannounced or unscheduled inspections are known as random inspections. They can occur at any time and any stage of a construction project. There can be as many inspections as the building inspector deems necessary. For a 30-week construction project—the model measured by Doing Business—several economies have 1 random inspection, while the Lao People’s Democratic Republic and Liberia have 12 and Guinea has 15.3

Though random inspections can reveal more instances of noncompliance with building regulations than do phased inspections, they also create more opportunities for graft. And requiring a lot of inspections might not be necessary for smaller buildings that do not pose serious environmental or hazardous risks. Still, having no inspections is a safety risk.

Phased inspections occur during specific phases of construction. They occur regardless of a building’s size, location or use. Economies such as Canada and the United Kingdom recommend conducting such inspections in 9 phases, but this number might differ for other economies based on factors such as geographical location.4 Thus both countries have implemented hybrid systems that include both phased and risk-based inspections. On the other hand, Bhutan inspects all buildings at 7 phases of construction, without additional risk-based inspections. A phased inspection strategy demands that authorities have enough resources to inspect every building at each required phase. An insufficient number of inspectors can lead to missed, hurried or incomplete inspections.

Risk-based inspections have become more popular in the past decade, resolving some of the issues from random and phased inspections. Though many risk-based inspection systems include a minimum number of phased inspections for all buildings, they typically give priority to buildings with high risks—such as environmental ones—and optimize the process. For example, the United Kingdom has defined key stages of inspections for all buildings, plus additional inspections based on the building’s risk level (table 5.1). Hence risk-based inspections focus on what to inspect and when. Risk-based inspections are conducted to ensure a building’s structural safety, fire safety, worker safety and public safety but in a more efficient manner. Riskier buildings face more inspections. Having fewer inspections for less risky buildings lowers costs without compromising safety, increasing flexibility and enabling inspectors to move away from random and phased inspections.

In addition to defining the inspections that must take place for different types of buildings, risk-based inspections systems have involved a growing shift in risk, responsibility and liability from public bodies to private engineers and inspectors. Private practitioners tend to have the skills, expertise and experience to function without controls or with limited controls.5 They are also held liable for the safety of buildings and subject to independent oversight.

### TABLE 5.1 The United Kingdom requires a range of building inspections

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<thead>
<tr>
<th>Phased inspections required for all buildings</th>
<th>Inspections based on risk assessment</th>
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<tr>
<td>• Commencement of works</td>
<td>In addition to key stage inspections, high-risk sites must undergo extra inspections. The assessment is adjusted accordingly during construction.</td>
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<tr>
<td>• Excavation of foundation</td>
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<tr>
<td>• Superstructure, structural frame or components</td>
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<tr>
<td>• First fix (pre-plaster)</td>
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<tr>
<td>• In-situ testing, such as for drains, sound, air pressure, electrical and fire alarms</td>
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<tr>
<td>• Intermediate inspections when required</td>
<td></td>
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<tr>
<td>• Pre-occupation issue of a completion certificate</td>
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**HOW ARE RISK-BASED INSPECTIONS IMPLEMENTED?**

Efforts to develop risk-based inspections must consider several elements, including:

- **Classifying and assessing buildings.** Building classifications and assessments are important for determining the frequency and scope of inspections. Not all buildings face the same risks. Thus risk evaluation requires a holistic approach, and understanding the risks associated with different types of buildings is essential for successful risk-based inspections. Building classification is just as important when determining the necessary levels of review for the building plans prior to construction, for construction of the building itself and for assessment of the building after construction to ensure its compliance with safety standards.

- **Identifying who will conduct inspections.** Risk-based inspections rely on professional inspectors who are responsible for ensuring that buildings are constructed according to safety standards. If violations occur, inspectors must hold insurance to cover the loss of any structural damages. Accordingly, only experts certified by the state or a legal body should perform inspections.

- **Identifying the responsibilities of those authorities.** Inspectors’ mandates must
be clearly defined. In addition, a formal enforcement mechanism must be in place to ensure compliance with regulations and administer penalties for violations, as well as a conflict resolution mechanism in cases of disagreement between inspectors and developers.

Different economies have taken different approaches to risk-based inspections. In the 1990s Austria introduced three classes of construction so not every building requires a building permit, as had been the case:

- **First class.** For small expansions or other small construction works except from building permits and planning and zoning reviews.
- **Second class.** For construction works up to 20 square meters that do not require building permits and technical reviews. But these projects are subject to planning reviews, and signatures must be obtained from neighbors to ensure they have no objections to the project.
- **Third class.** These projects require building permits with third-party review of all crucial elements. A subcategory in the third class known as the “light procedure” requires little or no independent review of building design and construction. In Vienna a structural review is the only requirement for this subcategory. Though notifications to the relevant agency are required once certain stages of construction are completed, inspections are the exception rather than the rule under the light procedure.

Economies that have been using risk-based inspections the longest, such as Australia and France, have comprehensive classifications of building categories and risks based on size and use. Their systems have proved quite successful over the years. Thus the case study has focused on the experiences of these two countries.

**AUSTRALIA AND FRANCE: TWO EXAMPLES OF GOOD PRACTICE**

**Australia: privatizing inspections**

In Australia risk management for construction emerged in 1999 based on techniques developed by Standards Australia, an independent nonprofit considered the country’s leading nongovernmental standard-setting body. Buildings began being inspected by local councils, and risk assessments by those councils determined the number of inspections needed, with standards varying by council. But the 2005 Building Professionals Act allowed for accreditation and regulation of private inspectors. By opening to the private sector, Australia introduced competition to a system that had primarily been the responsibility of local councils. Furthermore, in 2005 Australia amended its Building Code to introduce a risk-based categorization system for buildings that inspectors had to follow (see next section for more details on the categorization).

In addition, in 2010 changes were made to the Building Professionals Board, which had been the sole body authorized to accredit private inspectors, regulate the profession and enforce disciplinary and legal actions against private inspectors. Now principal certifying authorities can accredit professionals from various backgrounds—including engineers, planners and building and land surveyors—to serve as inspectors. In addition, the board became responsible for accrediting, regulating and enforcing actions against certified inspectors.

As a result principal certifying authorities can retain both private and council inspectors, who report back during and after construction. By law, principal certifying authorities must be designated to conduct the mandatory inspections at the critical stages (stipulated in the Environmental Planning and Assessment Act), manage inspections and decide if additional inspections are needed based on a building’s risk level. The principal certifying authority must also issue the certificate of construction (a mandatory certificate that must be obtained prior to the commencement of construction works) and certify the safety of the building upon completion of construction. The principal certifying authority is held liable if any issues arise related to the building construction. However, inspectors must obtain an annual professional insurance up to a minimum of AUD 1,000,000 in order to be retained in their position.

**France: establishing insurance-driven building control and mandating risk-based inspections**

France’s 1978 Spinetta Law provided a legal framework for creating technical control agencies and dramatically modifying liabilities in construction works. Until then it was unclear who was responsible for inspecting buildings during construction. The government had limited involvement in the construction industry. Builders and architects were simply required to have 10-year warranty insurance for damages caused by a building collapse. Furthermore, while previous legislation had stipulated various categorizations of buildings, it had not stipulated what types of inspections should be conducted for each category.

Under the Spinetta Law only private, state-licensed technical control agencies can inspect construction sites. Technical controllers cannot be directly involved in construction-related activities. They must be accredited for 5-year terms based on requirements defined by a state decree, including for technical competence and professional conduct. Technical control agencies must verify buildings’ strength, safety and compliance with building regulations, including standards for seismic construction and accessibility for the disabled. In addition, all parties involved in construction—such as contractors, builders, and technical control agencies—must obtain insurance covering defects in construction. Compliance with regulations has improved dramatically since the Spinetta Law was implemented.

**Building classifications in Australia and France**

A building’s risk level is based on its classification, use and height. Volume 1 of the 2005 Building Code of Australia considers all buildings low risk regardless of their class if they are less than 4 stories except class 9 (table 5.2). Class 9 buildings are considered high risk due to their uses and regardless of their height. Moreover, some buildings are considered high risk because of their importance as class 3 or 4 buildings. Class 3 buildings house more than 250 guests, motels or guest
houses. Class 4 is the residential part of buildings classified under classes 5, 6, 7, 8 or 9. For example, if an office building has one floor with residential apartments, that floor is classified as class 4.

Risk levels and building classes enable principal certifying authorities to develop inspections that protect public safety. For example, 2 buildings might be considered low risk because of their height. But depending on their uses, 1 might require more inspections because of the complexity of its construction. In addition to the risk-based inspections that principal certifying authorities deem necessary, several critical inspections are set by law for each building class, including standalone residences (class 1) and garages and parking lots (class 10). For classes 1 and 10, 7 inspections are required, compared with just 3 for class 7 warehouses. 

In France building classifications are mainly based on occupancy and use, though height also plays a role. Only nonresidential buildings that receive visitors—such as malls, office buildings or movie theaters (établissement recevant du public, or ERP) and residential buildings up to 50 meters tall are categorized. The 5 categories for these buildings are based on the number of people they can house (table 5.3). For categories 1 to 4 the threshold includes both employees and visitors, while only visitors are considered for category 5 (which has more lenient safety regulations).

Mandatory inspections are required for categories 1 to 4 and are classified into 2 main categories: L and S. Each category has sub-categories that relate to a specific part of the building such as framing, roofing or thermal performance.

Depending on a building’s class and type, the safety control agency conducts either category L or S inspections. High-risk buildings have both types of inspections. A special category, category PS (Paraseismic), is applied to zones prone to seismic activity. In this case, all three categories of inspections are mandatory.

### What Challenges Have Been Faced?

Economies seeking to adopt risk-based inspections can face several challenges. First, economies with weak legal institutions will find it nearly impossible to implement such a complex system. It requires passing legislation that, among other things, clearly stipulates categorization of buildings, identifies qualification and licensing requirements for private practitioners, calls for strong oversight mechanisms and calls for the establishment of agencies that are well-equipped and trained to ensure the safety standards of buildings. Having clear zoning and land regulations is also key. In some economies implementing risk-based inspections has been a challenge because authorities do not know if the building that will be constructed is in a high-risk zone (such as a zone prone to flooding or seismic activity, has natural reserves, is a historical heritage site, or the like).

Second, enforcement of the legal framework is essential to ensuring its successful implementation. The relevant agencies must be independent enough to enforce the law and exercise their right to conduct any needed oversight. For example, they must establish mechanisms whereby clients can submit complaints about their dissatisfaction with an inspector, then investigate the case and take disciplinary actions against the inspector if the case is confirmed.
DOING BUSINESS 2014

Corruption can be reduced as well in these cases: without the proper enforcement mechanisms, it becomes easier to engage in paying bribes to the inspectors. Economies with successful risk-based inspections have strong legal institutions and solid enforcement mechanisms.

Consider Brazil, where the construction industry has expressed strong and growing demand for risk-based inspections. But because of a weak legal framework and poor dissemination of a risk assessment methodology, only São Paulo was able to implement risk-based inspections—and the system remains limited. Many practitioners lacked sufficient knowledge and were not well-trained to properly identify the various types of risk involved in the different types of buildings.17

Establishing a conflict resolution mechanism can also be challenging. It entails establishing a system where entities adversely affected by permitting authorities’ decisions can appeal them. Like the enforcement mechanisms, conflict resolution mechanisms can only be successful if there is technical competence, procedural safeguards and transparent processes. For example, Canada’s Building Code Commission members have the appropriate technical expertise and are appointed from both the regulatory and industry sectors. The commission’s decisions are binding and hearings on technical issues almost never exceed 6 to 8 weeks.18

Another main challenge is securing adequate resources. Developing a sound risk management system to implement risk-based inspections requires investing time and money. Risk-based inspections involve identifying and assessing the risks of every building. Such efforts are time-consuming and require staff with technical expertise. Thus sufficient financial resources have to be allocated to training. And to allocate these resources wisely, agencies must be run by individuals who are technically competent and can act independently.

Still, economies can start with smaller steps that do not require extensive resources. In 2012 the municipality of Ciudad de Guatemala issued a new technical manual on construction permits that introduced a risk-based approach to inspections conducted during construction. Low-risk projects—buildings smaller than 3,000 square meters with 3 floors or fewer—were exempted from inspections during construction but remain subject to a final inspection. Before, random inspections for low-risk projects occurred about once a month.

Finally, economies implementing risk-based inspections must develop liability and insurance systems. Doing so helps hold building inspectors and enforcement agencies accountable and deters them from delaying the issuance of permits. Building inspectors in those economies, such as Australia, France and the United Kingdom, hold insurance regimes that guarantee compensation in case of defects. But in most developing economies implementing such a regime can be a challenge since insurance systems are not readily available.19

WHAT BENEFITS HAVE BEEN REALIZED?

Implementing risk-based inspections can present enormous challenges, but the benefits are greater. After France implemented its Spinetta Law, construction-related conflicts and litigation fell, protection improved for owners and contracting authorities, and building safety, quality and compliance with building standards increased. The reforms also lowered repair costs.20

Indicators of construction quality—as measured by the percentage of buildings for which insurance claims are filed and related repair costs relative to the cost of the building—have also improved. For instance, repair costs as a percentage of construction costs fell from more than 4% in the 1990s to 3.6% for buildings completed after 2001. That these figures are both low and declining reflects the system’s effectiveness.21

In 1984 the United Kingdom began modernizing its building regulation. As in Australia, builders can now choose whether to have inspections conducted by licensed private inspectors or local public authorities. This has greatly benefited clients because if they choose a private inspector, they can involve the inspectors at an earlier stage of the process (meaning, before construction even begins). A public inspector is only involved during construction. In 2012, 60 or so private inspectors—including several large corporate inspection firms—handled 30% of building control work. Introducing a private alternative to public building control has made the process more efficient and expedited services.22 Inspections in the United Kingdom are not free of charge, so by having clients choose private inspectors, local public authorities are losing revenue and thus have an incentive to compete with the private sector.

But much of the success of these economies has also been a result of strong implementation and oversight of the privatized systems. First, a robust system of qualification and licensing requirements exists for private inspectors. Inspectors in these economies have extensive technical expertise, which results in higher compliance with building codes.23 And enforcement agencies operate with considerable independence and can hold private practitioners accountable for wrongdoing. Without these necessary safeguards, the effectiveness of a privatized system can remain limited.

For example, the former Yugoslav Republic of Macedonia privatized its design and construction reviews process. Many requirements and documentation were streamlined or eliminated. In just one year the time needed to obtain a construction permit was cut by 22 days and the number of procedures required by 10 as measured by Doing Business. For inspections, FYR Macedonia introduced two categories of buildings: those of national importance and those of local importance, such as commercial warehouses. The 5 phased inspections previously required by the State Inspectorate for Construction and Urban Planning for buildings of local importance were eliminated, and construction oversight can now be performed by independent professionals hired by investors. But licensing requirements for engineers are not yet robust and oversight of their work remains weak.


**CONCLUSION**

Introducing risk-based inspections is challenging. Among the many prerequisites are sound legislation, accurate categorization of buildings and effective agencies with sufficient resources, well-trained workers and legal mandates to conduct inspections. Economies that have successfully implemented such systems have seen more efficient inspections of their construction industries without compromising the safety of workers, the public or buildings.

Australia privatized its inspection system, while France strengthened and clarified its liability regime. Technical controllers must be licensed, and technical control agencies are held accountable for building safety. And while Australia categorizes buildings based on their uses, France categorizes its buildings based on their occupancy. Though the two countries took different approaches, both emerged with far more efficient construction inspection systems.

**NOTES**

This case study was written by Marie Lily Delion and Joyce Ibrahim.

2. World Bank Group 2013b. The economies are Australia, Austria, Republic of Congo, Czech Republic, Denmark, Finland, Germany, Iceland, Ireland, Kenya, Mali, Mauritius, the Netherlands, New Zealand, Portugal, Slovak Republic, Spain and the United Kingdom.
10. Environmental Planning and Assessment Act (EPAA) 1979. These classes are 1 (standalone houses) and 10 (other domestic utilities such as garages).
11. While technical control agencies are primarily responsible for the inspection of buildings, they also play a role at the outset with the design and plans of the building.
16. Clause 162A of the Environmental Planning and Assessment Act 1979 addresses the critical inspections required for each category.
17. Martins and others 2011.
Access to electricity is essential for firms. Yet many entrepreneurs around the world struggle with high costs to connect to electricity grids. In 2013 the cost to connect a single warehouse to a power supply ranged from an average of $19,112 in South Asia to $38,500 in Sub-Saharan Africa. Globally the average was $29,134 (figure 6.1). Self-supply is much more costly—often prohibitively so. Moreover, high electricity connection costs often go hand in hand with high transmission and distribution losses. Experts contacted by Doing Business identified high connection costs as the main barrier to accessing electricity in their countries (figure 6.2). That was the case for all income groups except low-income economies, for whom a lack of generation capacity is the main barrier.

Utilities spread new connection costs between tariffs and connection fees

Every electricity utility has to recoup the costs of a generation plant, transmission and distribution networks and to foster income for future expansion. One way of doing so is by levying network costs to new customers, in the form of an advance lump sum payment to facilitate infrastructure works for an electricity supply. This lump sum is called customer’s capital contribution.

If a customer is not near the existing network or the network is already fully used and new capacity is required, the cost of extending the network might be high. In such cases customers have to pay all or part of the capital cost—which might be a significant barrier to obtaining a new connection, especially in low-income areas. Alternatively, if a large share of the costs is recovered through tariffs rather than through advance lump sum payments, new customers enjoy a significant benefit at the expense of other customers.

Utilities have to balance new connection costs between present and future requests

Many studies have focused on the balance between connection costs and tariffs. This case study highlights one way of striking the right balance between costs for new and future connection requests.

Costs for electricity connections are usually set by distribution companies and often reviewed by regulators when such agencies exist. Because utilities allocate costs for new connections between existing and prospective customers, they also have to balance economic efficiency and fairness. But it is often difficult to distinguish between capital works for specific customers and those needed for projected growth or safety and reliability. That leaves room for new customers to pay for investments in the network that will benefit other customers as well.

Consider a customer who wants to connect a warehouse to electricity. The customer’s premises could get connected to an existing transformer with sufficient spare capacity, or the utility could install a new transformer. This latter case could happen because a transformer is required for the customer but it could also be that the utility has development plans and wants to connect future customers to this transformer. Transformers are expensive. Customers can end up paying for more
than is needed for connection requests, subsidizing future customers. Explicit rules on the allocation of costs are essential for fairness to customers.

In addition, connection costs are not fully transparent in many economies. Utilities often present customers with individual budgets instead of regulated capital contribution policies aimed at spreading the fixed costs of expanding networks. It makes it even more difficult for customers to assess how connection costs are spread among their requests and possibly reinforce the electricity network.

**WHAT HAS THE GETTING ELECTRICITY DATA SHOWN?**

While there are many datasets on energy demand and supply quality, previously no global dataset existed on benchmarking connection costs across economies. The getting electricity indicator offers an annual comparison of the procedures, time and cost of obtaining an electricity connection in 189 economies, with data going back to 2009. Of the 3 indicators, costs vary most. This study aims to identify bottlenecks and good practices about calculating costs for new customers. Economies have tackled high connection costs in different ways. In Japan, it costs nothing for an entrepreneur to connect a warehouse to electricity—the costs of expanding the distribution network are covered by electricity tariffs. Papua New Guinea’s utility has a payment scheme that allows customers to pay capital contributions in monthly electricity bills.

The indicator shows that costs can usually be divided into 2 categories: a clearly regulated connection fee based on a formula or set as a fixed price, and variable costs for the connection that take into account the labor and material required. Where a new connection can be made directly to the low-voltage network, regulated and fixed fees represent a larger share of the connection cost in high-income economies. In general, the higher the income per capita is in an economy, the higher is the share of regulated fees in the total cost.

Sweden is among those that provide clear regulation of fees. For the 140-kilovolt-ampere (kVA) connection assumed in the getting electricity case study, costs are fixed and based on an average for similar projects in the area. Information on fees also tends to be more easily accessible in higher-income economies—in a regulation, on a website or through a brochure or board at a customer service office.

**TRINIDAD AND TOBAGO’S EFFORTS TO MAKE ACCESSING ELECTRICITY FAIRER**

Trinidad and Tobago’s strategy for lowering electricity connection costs focused on finding a fair scheme to allocate costs between new and future customers. In 2006 T&TEC—Trinidad and Tobago’s public, regulated electricity utility—got complaints about the costs of connecting to electricity. The most controversial issue was the capital contribution. Where the distance of the customer was far from the network or the network was fully used and new capacity was required, extending the network would increase the overall cost.

Customers paid for extensions (less the offset of revenues from the connection in the third year) required to connect to the system. If another customer sought a connection the new customer would be able to use the assets funded by the first customer. So a free-rider problem arose. There was no mechanism to reimburse customers that had funded connection assets shared by others whose emergence was not anticipated at the time of original application.

The legal basis for the capital contribution imposed by T&TEC arose from the T&TEC Act, Chapter 54:70 which states that clients had to pay for new electricity connections if they were more than 60 feet away from the existing grid. T&TEC presented individual quotes to customers who had no basis to contest them should they want to. A customer requesting a new connection of 140 kVA for a warehouse located 150 meters away from the existing network had to pay more than $8,000 in Port of Spain in 2009.
FIGURE 6.3 How does the reimbursement of capital contribution work?

1. First customer paid for the construction of the connection.
2. Later, new customers request connection to utility. They can be connected to the line already constructed.
3. Utility reimburses customers who paid for the construction of the electricity line.

ESTABLISHING A CAPITAL CONTRIBUTION WORKING GROUP HELPED

Trinidad and Tobago’s regulator, the Regulated Industries Commission (RIC), recognized that the capital contribution was contentious because the calculation of connection costs was complex and somewhat subjective. In 2006 the RIC established a working group to review capital contributions. The group was comprised of representatives from non-governmental organizations, the Chamber of Industry and Commerce, Bureau of Standards, Ministry of Legal Affairs, Electricity Commission and the RIC. The chair of the group was a representative from the Network of NGOs of Trinidad and Tobago for the Advancement of Women.

The group adopted a comprehensive approach that examined procedures and acts regulating capital contributions and looked into what utilities in other economies were doing. Their research focused on whether there was a clear, formal capital contribution policy, the issues addressed in the policy (such as for exemptions, reimbursement and dispute resolution) and the methods used to determine the capital contribution.

The group found that globally, service providers give users different ways to connect to electricity networks. One involves customers paying only for the assets required to connect to a system, excluding the costs of extending and reinforcing the distribution system. A third option followed by a few service providers, where the costs of assets for a new connection are deemed part of the general system and so are recoverable from all users through tariffs or system charges.

RECOMMENDATIONS FROM THE CAPITAL CONTRIBUTION WORKING GROUP AND FINAL PROPOSAL BY THE REGULATED INDUSTRIES COMMISSION

The Capital Contribution Working Group submitted its report to the Regulated Industries Commission in early 2007, and the report was widely circulated to stakeholders and the public. The document was finalized in 2008 and implemented by T&TEC in 2009/10, making connection costs fairer and more transparent. The groups also made 3 main recommendations for Trinidad and Tobago that have been implemented:

- Introducing a reimbursement scheme. To ensure that connection costs are more widely spread across different users, assets eventually shared by customers connecting later must be reimbursed to initial customers by T&TEC (figure 6.3).
- Setting connection costs with revenue from electricity supply. T&TEC is required to show that a connection is not commercially viable without a capital contribution and that it should be no more than what it would cost to be commercially viable. This approach allows a balanced allocation of costs because a new connection is also a source of future revenue. But large industrial customers still bear the full capital costs of connecting to the network, and connection costs are small relative to the company’s turnover.
- Involving the private sector. Customers can use T&TEC employees or contractors for conducting connection works. But T&TEC should prepare a list of prequalified contractors for customers, specify technical criteria and inform customers about the average costs of works in various areas. Many economies have opened their electricity markets to prequalified contractors—offering more options to customers and helping utilities meet the demand for new connections in a timely, cost-effective way.

OBSTACLES TO IMPLEMENTING THE NEW POLICY

As with any new policy, there was some resistance from the party administering the changes. T&TEC initially found it difficult to get its staff to support the new policy. Workers considered reimbursement the most burdensome issue because it required keeping records of the first client and subsequent ones, along with the works concluded for each. The task is tedious, as a detailed break-down of the works and associated costs is needed to identify future parts that benefit customers connected later. T&TEC upgraded its system to track new connections with the required details and provided training to implement the policy. The Regulated Industries Commission also extensively publicized the new policy in major newspapers and met repeatedly with T&TEC leadership and distribution staff.

THE SCHEME IS WORKING

By 2013 T&TEC had implemented the regulator’s recommendations. When installing new connections, the electricity company’s engineers clearly mark the installed equipment and materials and link them with the customer’s records in the utility’s database. If new customers...
Caribbean found that Trinidad and Tobago’s Regulated Industries Commission ranks highest in electricity governance. The commission’s strong push for reform of the capital contribution policy made it work.

- Involving stakeholders from the start. Bringing in stakeholders from the beginning and getting the utility on board was a good idea. The utility was part of the working group, and its views were taken into account at all stages. Public consultations were conducted by the Regulated Industries Commission on the Working Group’s report and enabled people to contribute to the process.
- Learning from other utilities. The Regulated Industries Commission and T&TEC conducted extensive research on reform and learned from global good practices—and so made well-informed recommendations and decisions.
- Clearly communicating about the reform. The Regulated Industries Commission conducted a thorough public relations campaign—including television, radio and newspapers—to explain the new policy. People could call in during television and radio programs to ask questions, an approach that was highly appreciated. Most of the questions were about reimbursement and contestability.

WHAT WORKED WELL?
• Having an active regulator. A study of regulators in Latin America and the Caribbean found that Trinidad and Tobago’s Regulated Industries Commission ranks highest in electricity governance. The commission’s strong push for reform of the capital contribution policy made it work.
- Involving stakeholders from the start. Bringing in stakeholders from the beginning and getting the utility on board was a good idea. The utility was part of the working group, and its views were taken into account at all stages. Public consultations were conducted by the Regulated Industries Commission on the Working Group’s report and enabled people to contribute to the process.
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NOTES
This case study was written by Maya Choueiri, Caroline Frontigny and Jayashree Srinivasan.
1. Foster and Steinbucks 2009.
2. Geginat, Gonzalez and Saltane 2012.
Taxation is essential for sustainable economic development, and tax administration is a basic function of a successful state. Taxation also helps make a government accountable to its citizens. When governments spend taxpayers’ money, they are more accountable to make budget decisions transparent and accessible.

By 2012, 76 of the economies measured by Doing Business had implemented electronic tax filing (e-filing) and electronic payment (e-payment) systems.

- In 2004 Malaysia’s Inland Revenue Board (IRB) launched e-filing and e-payment for income taxes.
- IRB encountered several implementation challenges, key among them the public’s initial reluctance to use the new system. So IRB increased its promotion efforts, upgraded the system and hired staff to show taxpayers how to use it.
- The number of individuals and companies using e-filing jumped from 5% of active taxpayers in 2006 to 37% in 2012.
- The time that businesses need to comply with Malaysia’s tax regulations fell from 190 hours in 2004 to 133 in 2012 as measured by Doing Business.

By 2012, 76 of the economies measured by Doing Business had implemented electronic tax filing and payment systems. This case study examines Malaysia’s experience with modernizing manual tax filing and payment and moving to a paperless online system. Malaysia shows the opportunities that technology can provide to taxpayers and governments—as well as the challenges that may emerge during the transition.

In 2004 Malaysia’s Inland Revenue Board (IRB) spearheaded an initiative to implement a system for filing and paying taxes that would promote electronic, paperless transactions. IRB’s goal was to become a global leader in tax administration. It sought to shift from the conventional way of submitting paper forms to earn the public’s trust and confidence.

Tax systems in developing economies, like those in more developed ones, face both new challenges and new possibilities as a result of technological change. Malaysia’s ongoing reform of its electronic tax filing and payment system shows how and under what conditions technology can benefit both tax authorities and taxpayers.¹

### BENEFITS OF ELECTRONIC TAX FILING AND PAYMENT

The goal of any tax authority is to establish a system of tax administration that allows for the collection of required taxes at minimum cost. A tax authority engages in many activities, such as processing returns and related information from taxpayers, entering tax return data into a database, matching returns against filing requirements, processing tax payments and matching them against assessments, and issuing assessments and refunds. One way to boost a tax authority’s efficiency is by expanding its use of information and communication technology. Such technology can facilitate a broad range of services, including registering taxpayers, filing returns, processing payments, issuing assessments and checking against third-party information.

E-filing systems increase the quality and quantity of information available to tax officers, enabling them to complete transactions faster and more accurately. Returns filed electronically have much lower error rates than paper returns and substantially cut the need to impose penalties and other punitive measures to foster compliance. The more efficient handling provided by electronic returns allows tax officers to issue assessments and refunds more quickly, and taxpayers know right away if their returns have been accepted by the tax authorities.² E-filing lowers the cost of handling returns—allowing administrative resources to be reallocated to other tasks such as auditing, customer services and tracking non-compliance.

The benefits of e-filing and e-payment systems extend to other electronic processes in the tax authority. E-filing and e-payment allow for better, safer data storage that can be used to implement a risk management system for auditing and enforcement. Automation helps establish a good system for tracking case files, which is essential for effective auditing.
and increases the speed and quality of data provided to auditors. In addition, e-filing systems are usually complemented by software that standardizes and facilitates processes for taxpayers, making compliance easier.

Finally, well-designed electronic systems can lower corruption by reducing face-to-face interactions. To ensure that taxes are collected efficiently and reduce opportunities for corruption, a generally accepted principle is that tax authorities should not handle money directly. Ideally, tax officials should have little direct contact with taxpayers and so less discretion in deciding how to treat them.

E-filing is also easy, flexible and convenient for taxpayers. E-filing makes it possible to file returns from a taxpayer’s home, library, financial institution, workplace, tax professional’s business or even stores and shopping malls. With an integrated e-filing and e-payment system, taxes can be filed and paid online from any place.

GLOBAL EXPERIENCES WITH AND LESSONS FROM ELECTRONIC FILING

Singapore was one of the first economies to adopt electronic systems in its public administration. In 1992 the Inland Revenue Department was replaced by the Inland Revenue Authority of Singapore, which developed an integrated, computerized tax administration system.

The authority’s first step was shifting from a hard-copy filing system to paperless imaging. Going electronic made administrative processes more efficient by freeing staff from unproductive paper shuffling, enabling better taxpayer service. The time needed to issue assessments dropped from 12–18 months to 3–5 between 1992 and 2000. This change allowed staff to work more on auditing and investigation. Automated standard taxation procedures also made the system less dependent on the subjective expertise of individual tax officers, reducing the potential for corruption. Return processing, auditing and payment functions were separated, and officials’ attitudes toward taxpayers improved.

Chile’s Internal Revenue Service was the country’s first public agency to adopt online technology—well before most other public services. Electronic methods were intended to facilitate tax compliance and decrease direct interaction with taxpayers. Chile is one of the few economies that have managed to approach nearly 100% use of electronic systems. Online tax returns were submitted for the first time in 1998.

Chile faced several barriers at the outset of e-filing. Taxpayers had limited Internet access, and tax preparers were reluctant to use the new system because they were unfamiliar with the technology and saw it as a threat to their profession. In addition, the revenue service’s information technology system could not handle the huge congestion of tax returns, especially in the few days just before the deadline. So Chile continuously upgraded its electronic system and offered prefilled electronic forms to simplify the process for taxpayers. The tax authority also introduced ambitious initiatives to overcome connectivity shortages by creating a public-private network of more than 880 e-filing centers, providing more than 30,000 connectivity points. In addition, it made arrangements with internet cafes so that taxpayers could use their equipment for free and trained operators at access points. It even developed a mobile training and awareness unit that traveled to different parts of the country to help people file taxes online.

The use of technology to foster tax compliance by the United States Internal Revenue Service (IRS) shows that more developed economies also face challenges in increasing the use of e-filing. The IRS introduced e-filing of federal tax returns in 1986. Though this system predated Singapore’s, it was initially less comprehensive. In fact, even though the number of electronic returns filed increased over time, the potential savings from that increase were partly offset by the ongoing use of paper filings for complex returns. But by 2012 the IRS achieved 80% e-filing of major returns.

Initially, e-filing was not entirely paperless. Until 1999 electronic filers still had to submit signed paper documents. The IRS realized that when taxpayers switched to e-filing, the time savings partly offset the costs of processing the still-large volume of signed paper documents. In 1999 the IRS introduced an electronic option to replace signed paper documents. In addition to lowering processing costs, e-filing has cut the time required to get refunds—making more taxpayers willing to file returns electronically.

MALAYSIA’S EXPERIENCE

Seeking the benefits of electronic tax systems and reflecting the government’s vision of leveraging online technology, Malaysia’s Inland Revenue Board (IRB) launched its electronic system for taxes in 2004. IRB aimed to increase revenue collection by improving taxpayer services. The goal was to cut time and cost and to allow taxpayers to comply with tax obligations more easily, enabling IRB to maintain a good reputation with taxpayers even as it widened its tax base.

With the new system, taxpayers can complete forms and provide needed payment details online instead of sending them by mail or taking them to a tax office. The online system was developed by IRB’s information technology department. IRB implemented a roaming public key infrastructure system that gives users secure access to sensitive information from any location without having to carry digital identification. The electronic system integrated tax filing and payment on one server—a major advantage over manual procedures.

For every tax filing or payment, taxpayers have to log in, select and complete the appropriate forms, sign and submit them digitally. An acknowledgment is received immediately. The e-filing system automatically calculates the necessary payment details. It also limits deductions that taxpayers are entitled to based on deduction rules—enabling taxpayers to avoid mistakes that would result in penalties.

In addition, prefilled online tax returns have been available since 2006, starting with taxpayers basic information and later extended to include their incomes and reliefs. In 2012 IRB enhanced its e-filing system by introducing smartphone filing.
for individual taxpayers. That same year, it introduced organizational e-filing for company managing directors to enable companies to use their digital certificates to file returns electronically. Previously, directors had to use their personal certificates.

In addition, IRB introduced automatic refunds. Due to the big number of refund cases and to expedite refunds, refunds were directly credited to taxpayers’ accounts through electronic fund transfers—reducing the number of unclaimed checks.

**IMPLEMENTATION CHALLENGES**

IRB encountered several challenges implementing e-filing and e-payment, key among them is the public’s readiness to use it. When the system was introduced in 2004, both Malaysian and non-Malaysian citizens could choose to file their tax returns manually or electronically. The private sector was not involved in the development of the project. Its feedback was sought later.

Two years into the project, few Malaysians were using e-filing. Though taxpayers and tax preparers recognized its benefits, the number of taxpayers using the e-filing system remained far below expectations, with individuals and firms using e-filing accounting for just 5% of the taxpayer population in 2006.13 There may be many reasons for this initial lack of enthusiasm. When tax systems change, taxpayers and tax authorities take time and incur costs adapting to and adopting them.

The low use of the electronic system was mainly due to the initial reluctance of Malaysian taxpayers to abandon paper-based processes. Studies were conducted to analyze taxpayers’ intentions to file electronically and their willingness to do so.14 Uncertainty about the security and privacy of information transmitted online was one of the reasons for low use of e-filing. The new system also created anxiety for users uncomfortable with the technology. Returns had to be completed online; users could not complete soft copies of their returns offline and upload them to IRB.

### A CHANGE IN STRATEGY

Because of the low initial participation in the electronic system, in 2008 IRB expanded its promotion efforts, sponsoring seminars, talks and television advertisements and distributing flyers and pamphlets. IRB also set up booths at conventions and held roadshows to promote the electronic system and raise public awareness, using the slogan “as easy as 1, 2, 3.” IRB also realized the importance of involving the private sector and asked professional bodies such as tax preparers and accountants to share ideas on how to enhance the online system. IRB also gathered feedback from taxpayers through its customer care centers and branches.

At first some taxpayers and tax preparers reported that the server was slow and often failed. Authorities responded with several upgrades to make it accessible with different browsers. IRB also installed computers in its offices so that taxpayers could file electronically, and hired workers to train taxpayers on how to use the system. And it launched a program to help taxpayers during the peak filing season. Special counters with extended operating hours at all branches were made available for the public to submit their returns through e-filing.

A tax authority gains the most benefits from e-filing when it achieves 100% use of the online system for filing and paying taxes. Accordingly, IRB provided incentives and services to encourage e-filing. For example, IRB offers a grace period of 15 days from its official deadline if returns are filed electronically.15 In addition, if a tax return is submitted late, the IRB penalty is 5% less if the return was submitted electronically. The charter for IRB clients was redrawn to include a pledge to refund any excess taxes within 30 working days from the date of receipt if the returns were filed electronically.

IRB continues to encourage taxpayers to file online. Among its latest initiatives, it is offering to do presentations at companies with at least 200 employees who use the service. The use of the online system has picked up dramatically: by 2012, 37% of active taxpayers filed electronically.16

### POSITIVE OUTCOMES

Malaysia’s efforts are showing results. Between 2006 and 2011 the share of individuals and companies filing electronically increased from 5% to 34% (figure 7.1). Over the same period, tax collections increased from 14.5% of GDP to 15.3%.17 Further analysis would be needed to fully understand the link between e-filing and revenues.

IRB’s ongoing efforts to improve its electronic tax system have lowered the administrative burden of complying with corporate tax obligations as measured by *Doing Business*. In 2006 it took 24 fewer

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**FIGURE 7.1** Since 2006 e-filing usage has jumped among individuals and companies in Malaysia

![Graph showing increase in e-filing usage from 2006 to 2011](image-url)

Source: World Bank, World Development Indicators database; Malaysia Inland Revenue Board data.
CONCLUSION

Electronic systems for filing and paying taxes, if implemented well and used by most taxpayers, benefit both tax authorities and taxpayers. Malaysia’s experience has shown the opportunities that technology can provide as well as the challenges that may emerge as the users are phasing in the change over time.

FIGURE 7.2  Malaysia’s electronic filing system has eased compliance with tax obligations for businesses

Source: Doing Business database.

hours to file taxes than in 2005 (figure 7.2). By 2007 far more small and medium-size companies were filing electronically, further reducing time to comply with corporate income and labor taxes obligations from 166 hours in 2006 to 145 in 2007. In 2010 tax preparers deployed new software linked to IRB’s e-filing system. In addition, IRB improved its e-filing system and introduced online filing of tax estimates. These improvements cut compliance time to 133 hours a year.

NOTES

This case study was written by Joanna Nasr.

12. Malaysia Inland Revenue Board data.
13. IRB data. This is the percentage of taxpayers who used e-filing but did not necessarily pay taxes electronically.
15. Malaysia Inland Revenue Board website.
For corporate taxpayers, the due date is 7 months from the closing of account. If a company’s accounting period ends with the calendar year (which is usually the case), the deadline for manual submission is the end of July, with an additional 15 days if filings are submitted electronically.
16. Malaysia Inland Revenue Board data.
17. World Bank, World Development Indicators database.
An economy’s competitiveness is driven by many factors, including how quickly, reliably and cost-effectively the private sector can trade goods. Today’s manufacturers and agricultural producers operate in a global supply chain. Thus an efficient international trade system can increase economic opportunities and improve livelihoods—especially in poor economies with small domestic markets.

But in many parts of the world, international traders must spend a lot of time preparing and submitting information to government offices ranging from customs to port authorities, each with its own rules and form requirements. These reporting requirements are often confusing, overlapping and onerous. In Madagascar the government offices involved in trade span 350 kilometers, and hard copies of forms had to be submitted to each until an electronic platform introduced in 2011 transformed the document submission process and reduced delays (see the chapter on trading across borders).

A single window system can improve information flows by sharing needed information with all parties involved in trade, including private participants such as banks and insurance companies and public agencies such as immigration and vehicle registration authorities. The key concept for an effective system is to enable traders to submit standardized information and documents through a single gateway, eliminate redundant processes by traders and government agencies and improve coordination and cooperation between authorities. Reducing multiple data submissions to different agencies helps minimize errors during data entry too.

A single window system can improve information flows by sharing needed information with all parties involved in trade, including private participants such as banks and insurance companies and public agencies such as immigration and vehicle registration authorities. The key concept for an effective system is to enable traders to submit standardized information and documents through a single gateway, eliminate redundant processes by traders and government agencies and improve coordination and cooperation between authorities. Reducing multiple data submissions to different agencies helps minimize errors during data entry too.

Single window systems have other benefits. One that collects data systematically enables consignments to be categorized more easily based on the associated risk by allowing creation of trader profiles, limiting physical inspections to risky cargo and potentially making trade procedures more secure and efficient. By combining a portal where up-to-date information on tariffs and other legal and procedural requirements are available and by integrating a payment system, duties and other charges can be paid more quickly and accurately, raising government revenues.

Today 73 economies have single window systems of varying complexity. Exporting and importing a standardized cargo container is faster in such economies. In addition, fewer documents are required for importing, but the impact is smaller than the impact on time—an average of 6.6 documents in economies with single window systems compared with 7.8 in those without—underscoring the point that single window systems are mainly making submission of information more efficient (figure 8.1).

Using a single window to lodge information can even fight corruption by reducing interactions between traders and authorities. And it can make the clearance process more predictable and enhance transparency. Among the 73 economies with single window systems, 86% make information on duties and tariffs publicly available, while only 54% of the other 110 economies measured by Doing Business do so.

Though a single window system brings considerable gains, implementation is a major undertaking involving many stakeholders and requiring long-term commitment from multiple players in government and business.

### Implementing trade single windows in Singapore, Colombia and Azerbaijan

- Trade single window systems can cut trade times and costs by making information flows more efficient and streamlining trade procedures.
- Implementing a single window system involves many stakeholders and requires long-term commitment from government and business.
- Systems must fit the environment and level of development where they operate.
- Singapore’s TradeNet system, in operation since 1989, has evolved into a highly integrated virtual platform.
- Colombia’s Single Window for Foreign Trade, launched in 2005, has adopted a gradual approach, adding functions and integrating agencies over time.
- Azerbaijan has sought to learn from other economies while implementing its single window system.
takes many years and might have to be done in phases. Though their overarching goals are the same, single window systems differ greatly, highlighting the need to adapt them to each economy—taking into account the computerization of users, internet connectivity and the capacity of implementing bodies.

This case study describes the experiences of Singapore, Colombia and Azerbaijan. In the late 1980s Singapore became one of the first economies to embrace the single window concept, and it has evolved into a highly integrated virtual system, recognized as global good practice. Colombia’s single window was launched in 2005 and has also developed in stages. Today the system links 21 trade entities and is continuously adapting its system to make things more efficient for traders and government. Azerbaijan’s single window is the newest covered in this chapter and provides a revealing contrast to Singapore’s mature system. Azerbaijan launched its system in 2009 and so is still in the early stages of implementation. But the government is leveraging its position as a latecomer by learning from other economies.

By choosing 3 economies in different regions with different degrees of single window implementation, this case study aims to show the various approaches that governments take and the challenges encountered of pursuing effective single windows. The case study does not aim to promote a particular type of single window system nor endorse the experiences of these economies.

SINGAPORE

Singapore’s single window for trade—TradeNet, which began operating in 1989—began as an electronic data interchange system that allows computer-to-computer exchange of structured trade messages between the government and members of Singapore’s trading community.

After experiencing a recession in the 1980s, Singapore’s government established a high-level committee to review the weaknesses of the economy and develop strategies to improve economic competitiveness. One of the committee’s recommendations was to increase the use of information technology in trade.

The government had previously established a 2-day standard for normal processing of trade documents. But traders wanted quicker turnaround for just-in-time inventory management and deemed that waiting 2 days for normal processing (which could extend to 4 days for permit approvals) was too long.

So the government embarked on a large-scale effort to streamline the regulatory processes involved in approving trade permits. Committees of senior government officials and business leaders were created to ensure sufficient backing for using technology to reengineer and improve trade regulations and processes.

From vision to implementation

Singapore’s government created a steering committee for TradeNet to oversee the conceptualization of a national electronic data interchange system for trade declarations and permits. Three subcommittees—one for sea shipping, air shipping and government agencies—were then formed to improve exporting and importing processes, and to specify functional requirements and propose data standards. Before TradeNet some clearances were done manually and no overall computer system coordinated them. Every subcommittee developed profiles of essential trade documentation activities and cut the more than 20 forms used in international trade to a single online form for nearly all trade. This form was the core of the new computerized system.

The government created a private company to manage TradeNet, which in 1988 led to the formation of Singapore Network Services, now known as CrimsonLogic. Though funded by government agencies, the company is structured as a private, for-profit firm. The government reasoned that this approach would not require it to bear the cost of operating a nationwide network of infrastructure and services. Each account user pays $20 a month and less than $3 per transaction or permit. The first transaction on TradeNet was a shipping application submitted on January 1, 1989. By the end of that year TradeNet handled 45% of documentation for sea and air shipments in Singapore.

Overcoming obstacles

Early on, the main challenge was to convince users to switch to electronic trade declaration. Singapore adopted a phased approach to minimize the efforts involved in making the change. First it implemented electronic processing and approval of trade permit applications for noncontrolled and nontaxable goods, later extended to controlled and dutiable goods. In the initial phase the system was piloted on 50 users. Even after the system was extended, using it was voluntary for more than 2 years and did not become mandatory until 1991.

Singapore also launched a nationwide campaign to promote the system and smooth the transition to it. Even today, when the government rolls out major
changes to the system, it deploys mass marketing and communication programs to raise awareness and prepare users.

While promoting the new electronic system, the government recognized the challenges facing some businesses. Some companies were more computerized, so adjustments and burdens imposed by the new system differed. The government provided training and assistance for operations. Singapore Customs conducted courses, and public terminals were installed for small companies. And to encourage companies to switch, manual processing fees were raised to $10 a document, while TradeNet users paid $6.5 Thanks to such initiatives, today TradeNet handles more than 30,000 declarations a day, processes 99% of permits in 10 minutes and receives all collections through interbank deductions.6

What’s next?
Since 2007 Singapore has been pushing to extend aspects of TradeNet to commercial transactions in the trade community through TradeXchange. This system includes trade-finance transactions (for example, cargo insurance applications and supporting documents for factoring applications) and commercial documents (including commercial invoices and waybills). The government envisions achieving a more seamless flow of information along the supply chain. But as in other economies with similar initiatives—u-TradeHub in the Republic of Korea, the Digital Trade & Transportation Network in Hong Kong SAR, China—the system is yet to be embraced by the business world at large.

Singapore is an active member of the Association of Southeast Asian Nations (ASEAN), a regional body that has embraced the concept of single window systems and has an ambitious goal to establish an ASEAN-wide single window by 2015. Plans call for integrating members’ national single windows so that a single submission of information suffices for all ASEAN members.

COLOMBIA
Colombia began developing its single window system for foreign trade—Ventanilla Unica de Comercio Exterior (VUCE) in Spanish—in the early 2000s.7 After years of financial crises and economic slowdowns, in 2002 the new administration made modernizing public agencies and services a high priority. As part of a wide-ranging e-government initiative, the Ministry of Commerce, Industry and Tourism introduced the single window for foreign trade with the support of the Ministry of Information and Communications Technologies.

The push for new technology in the public sector came at a time when Colombia was becoming increasingly integrated with global trade markets. Negotiations for a free trade agreement with the United States began in 2003 and went into force in 2012, while other accords were negotiated with the European Union, Israel, Japan, the Republic of Korea and Turkey, among many others. The public and private sectors agreed on the need to address the bureaucratic, uncoordinated, inefficient nature of significant parts of the public administration. The government also wanted better information systems.

Many ministries and public agencies involved in foreign trade were working in isolation, sharing little or no information on trade procedures despite requiring essentially the same information from users and each other. Depending on the type of good exported or imported, traders had to visit and complete similar procedures at the different agencies in charge of issuing permits and approvals—such as the Colombian Agricultural Institute, National Institute for the Surveillance of Drugs and Food and Ministry of Commerce, Industry and Tourism. This led to duplicated processes, inefficient controls and reduced transparency in public administrations. For traders it increased delays and transactions costs.

After consulting with stakeholders, reviewing the process and identifying bottlenecks, Colombia’s government established an action plan and created a task force to lead efforts to harmonize requirements, procedures and documents among the entities involved in foreign trade. That led to the creation of the single window for foreign trade, which became operational in early 2005.

Features and implementation
The single window connects 21 public agencies involved in foreign trade—mostly ministries and health and safety entities—and 3 private companies that provide e-signature certificates and legal information on registered traders. The single window links them with importers, exporters, customs agents and brokers through an online platform that allows users to request procedures, approvals, authorizations and other certifications needed to import and export goods. In addition, tax identification and business registration records are available to the agencies connected to the system.

The single window is being implemented in stages. The first involved the import module, which handled import registration requests and import licenses for certain products. By November 2006, after the module’s gradual rollout, all such requests were made electronically. That same year the government introduced the export module for export authorizations. The third component, the single foreign trade form module, went online in 2008 and integrates registers of domestic producers and handles some export quota requests.

Existing laws and regulations offered the legal basis for using electronic signatures and payments, though implementation was not always easy. For example, some banks and companies were initially unprepared to conduct payments online.

In 2010 a fourth module of simultaneous inspection was launched. Key among its features is a system to facilitate exchange of information among control entities and anti-narcotics agencies so that inspections can be conducted simultaneously. The current scope is for containerized maritime exports.

From resistance to endorsement
At first, users and the officials in charge of processing requests resisted switching from the paper-based system. But their resistance eased thanks to the staged implementation of the modules, each featuring transition periods and training and outreach for all the parties involved. Officials also educated and trained users through conferences, workshops, official
communications and e-learning software. Moreover, the private sector tested electronic procedures through the single window before they were fully operational, making evident the advantages of the system from an early stage.

The single window has provided benefits to entities involved in trade, increasing efficiency and cutting times and costs. According to government sources, the system streamlined 135 procedures and 35 forms needed for importing into 1 step for traders, eliminating the need to visit agencies, reducing reliance on messenger services and minimizing the use of hard copies. The average response time has dropped by about 5 days for requests made at territorial offices that require approval from an agency linked to the single window. In addition, it takes 30% less time to issue a license requested through the system.

The system has enhanced the safety and integrity of trade transactions and generated more reliable data on foreign trade procedures and volumes for customs and other government agencies. There have also been gains for the entities linked to the single window for foreign trade. Besides better coordination and lower costs, the system has enabled agencies to expand their geographic reach and increase users. Updated equipment and electronic systems are helping agencies improve internal processes as well—a benefit not originally anticipated. The system has increased use of e-payment systems and e-signatures for procedures that go beyond foreign trade. According to an index that assesses e-government, Colombia ranks 43rd in the world, second only to Chile among Latin American and Caribbean economies.

A work in progress

Despite all the improvements, Colombia’s move toward a fully integrated single window system is still a work in progress, and challenges remain. The speeds at which the different entities linked to the single window have implemented electronic and streamlined procedures internally have varied. For example, the Colombian National Tax and Customs Authority (DIAN) is electronically linked to the single window but handles declarations for export and import through a separate system. Furthermore, though the single window allows traders in Colombia to conduct processes related to approvals and authorizations electronically, reliance on paper and manual procedures during importing and exporting persists, creating processing delays that slow the flow of trade transactions.

The government recognizes these constraints and is examining how to ensure that all agencies involved in trade reach the desired levels of efficiency. A 2012 decree established time limits for the agencies linked to the single window. Between 2012 and early 2013 that decree helped to cut response times for import registration requests at the Ministry of Commerce, Industry and Tourism by more than 95% (figure 8.2).

In addition, Colombia’s single window system is being reengineered to optimize business processes. In addition to enhancing data management, the effort aims to standardize the information in line with international standards. As a result some functions of the single window were made inactive in late 2012 and will not become operational again until 2014.

The Colombian government is working to include new functionalities for the 4th module of simultaneous inspection systems for exports and to develop a similar system for imports. A risk management module for reviewing and approving import requests according to established criteria is planned for launch in 2014. Furthermore, a logistic module to link public and private users to facilitate the information exchange at ports and airports will be developed.

AZERBAIJAN

The government of Azerbaijan has long considered establishing a single window system a key step toward modernizing customs services and improving the trade environment. The desire for a single window has been further motivated by the need to simplify and expedite exchanges of information between the public and private sectors and to increase transparency in trade. With these goals in mind, in 2008 the president of Azerbaijan made the State Customs Committee the lead authority for controlling goods and transportation crossing state borders.

Choosing from global good practices

As a first step, the State Customs Committee analyzed the process for inspecting goods and transportation passing through border checkpoints. It also studied global good practices for implementing a single window and researched international norms and standards.

The government considered 3 types of common single windows. The first is based on the principle of a single authority, where customs authorities are responsible for exercising or coordinat-
Agencies. The Netherlands and Sweden use such a system. The second type is a single system, which collects standardized data from traders, then processes and distributes it to all agencies involved in international trade. The United States uses such a system. The third type is an automated system, where traders submit a single electronic declaration to relevant authorities for processing and approvals and these agencies send users electronic releases and approvals. Mauritius and Singapore use this type of single window.

Azerbaijan chose to implement the single authority model, which involved transferring certain responsibilities from relevant agencies to the Customs Committee.

Implementation

Before the introduction of single window the same documents had to be submitted multiple times to various authorities operating at the border. Each authority (such as veterinary, phytosanitary and quarantine agencies) relied on their local databases, which were not connected electronically. Such lack of coordination hindered control and coordination at the border as well as caused delays for the traders.

To prepare for the transition to the single window, the Customs Committee established a commission to implement the new system. The government identified the main authorities to be integrated into the single window system as the Customs Committee, Ministry of Agriculture, Ministry of Transport, Central Bank, State Road Police, State Committee on Standardization, Metrology and Patents, a state sea administration and a state nuclear and radiological agency under the Ministry of Emergency Situations. Among the challenges for the State Customs Committee was to prepare its staff to work with the new system. The government improved the staffing of local customs authorities and developed hardware and software for the system.

Upon the single window implementation, the Customs Committee became responsible for controlling and checking all required permits and certificates for goods crossing the borders. While traders no longer interact directly with relevant agencies (veterinary, phytosanitary and quarantine agencies), these agencies still monitor the clearances performed by customs on their behalf. This approach has helped to eliminate duplication of control function at the border and has simplified document processing.

Introduction of the single window has also led to the development of a central database used by various government authorities. It gathers information on the types of goods and transportation crossing the border, the exchange of electronic certificates among relevant ministries, pre-arrival information for declared goods and pre-arrival notices for transportation crossing the border, reports on violations of customs rules, financial reports of traders and reports on savings in foreign currency.

Azerbaijan’s single window system is fully financed by the government. As a first step, an automated customs clearance system was implemented at inland border crossings on January 1, 2009 and became available to users free of charge. Implementation continued through 2011 in Baku and Sumgayit. In addition, an article on the single window was included in the new customs code that entered into force on January 1, 2012. It establishes that 29 customs checkpoints at the state border are to follow the single window principle—meaning that the single window covers all of the country’s customs posts.

Building on initial successes

The efforts to implement a single window were well received by the private sector, and even in its initial phases the single window system helped reduce waiting times for customs procedures at the border from 2 to 3 hours to 15 to 20 minutes.

Most small and medium-size enterprises, however, still physically submit customs declarations and supporting documents for customs clearance. In May 2011 the president signed a decree requiring government agencies to introduce electronic services as a first priority. Plans are to mainstream electronic submission of all documents for customs clearance, introduce e-signatures and e-payments and integrate information systems of other state agencies such as the railway, airports and Caspian seaports by 2016.

Lessons

Single window systems can benefit the entire trading community, public and private, by streamlining complex systems of

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**BOX 8.1 United Nations recommendations for establishing trade single window systems**

<table>
<thead>
<tr>
<th>The UN has identified key factors for successful implementation of single windows:</th>
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<tbody>
<tr>
<td>• Political will</td>
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<td>• Strong lead agency</td>
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<tr>
<td>• Partnership between government and trade community</td>
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<tr>
<td>• Establishment of clear project boundaries and objectives</td>
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<tr>
<td>• User friendliness and accessibility</td>
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<tr>
<td>• Enabling legal environment</td>
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<tr>
<td>• International standards and recommendations</td>
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<tr>
<td>• Identification of possible obstacles</td>
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<tr>
<td>• Appropriate financial model for the system</td>
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<tr>
<td>• Communications, promotion and marketing</td>
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</table>

Source: UN/CEFACT 2005.
Overcoming behavioral hurdles requires persistence

The 3 economies studied show that moving from a paper-based to an electronic system requires behavioral changes among users in both government and the trading community. People used to writing information in a paper-based system must be trained to enter it on a computer, and may feel that it takes longer to do so. Moreover, the switch might require additional investments, such as computer purchases and internet connections. For developing economies adequate electricity supply might also be a large constraint. Thus the authority in charge of implementation must have the patience and persistence to ensure sufficient time, training and outreach.

Collaboration with the private sector is essential

The business community must be fully on board with the move to a single window system, and its needs properly addressed. Businesses must be involved from the design stage through implementation. Moreover, they should have opportunities to provide feedback. Colombia used satisfaction surveys to identify issues, and Singapore provided facilities for online inquiries to maintain open, positive relations between the government and users of its single window system.

Legal basis must be established

Single window systems require changes to procedures in customs agencies and affect many other authorities. To ensure a smooth transition, a clear and comprehensive legal basis must be established for implementation of the new system.

NOTES

This case study was written by Mikiko Imai Ollison, Iryna Bilotserkivska and Robert Murillo.
Improving court efficiency: the Republic of Korea's e-court experience

Fair, speedy trials are essential for small enterprises embroiled in disputes. If business disputes take months or even years for courts to resolve, small firms might not have the financial strength to stay in business that long, regardless of trial outcomes.1 In such cases justice delayed is justice denied. Though small and medium-size enterprises usually try to avoid going to trial, effective contract enforcement systems matter for them.2 Efficient courts and enforcement reduce informality, improve access to credit and increase trade.3

E-government has been adopted by policy makers around the world to increase efficiency. Korea ranks first in the world on the E-Government Readiness Index, a composite measure of the capacity and willingness of economies to use e-government for development.4

An e-court is a suite of services that entails minimum use of paper from the moment a case is filed until its disposal. With e-courts, information is captured and passed on digitally, data exchange is not fragmented and case histories are complete and ready on demand, case management is automated, correspondence is exchanged electronically, fee payments are dealt with through dedicated websites and forms that simplify and streamline court proceedings are available to court users online. In Seoul attorneys and litigants can file lawsuits electronically. Lawsuits are automatically registered through the electronic case filing system, and then assigned to a judge who can access the corresponding files, organize and schedule cases and start processing claims.

THE COMPUTERIZATION OF KOREAN COURTS

For Korea efforts to achieve well-functioning e-courts started in the late 1970s, when visionary judges sought to create an orderly database of cases flowing through courts. After a group of judges started recording some cases on floppy disks, in 1979 the judiciary contacted the Korea Institute of Science and Technology to study the feasibility of electronic judicial proceedings. Convinced of the benefits of using information technology in courts, judges started creating more advanced databases and developing case management software.

Before word processing software was introduced in the early 1980s, Korean judges faced challenges such as writing judgments by hand and otherwise dealing with a paper-based system. Though some judges lacked basic information technology skills, Korea decided to start automating court processes through computerization. Efficient processes, increased transparency and better accessibility sought to increase public trust in the judiciary.

In 1986 the case management system was launched. This platform enabled internal court users such as clerks and judges to search all civil cases in the database. It was not easy to convince court users to change how they worked. But the new system had the potential to help judges deal with their caseloads more efficiently. Korea invested considerable resources in making the system as efficient and user friendly as possible.
A master plan for creating e-courts was then conceived and the case management system expanded and shifted from a client and server system (a centralized server accessible only in specific locations) to a web-based system (accessible through a web browser), allowing external users to search the database of cases. In addition, electronic signatures and digital certificates (for safety) were added to the system and—thanks to a nationwide information network—immediate national data on court activities became available, allowing for better resource allocation in courts.

E-filing of cases ensures better recording and faster processing. In 2010 Korea launched the electronic case filing system, which enables electronic submission, registration, notification, and access to court documents. To implement this system, Korea had to modernize its information technology infrastructure and amend laws and regulations to shift to paperless approaches. The system allows for e-filing of civil, commercial, administrative and family-affairs cases, and will soon integrate insolvency cases. It enables some judges to adjudicate up to 3,000 cases a year, manage up to 400 a month and hear up to 100 pleas a month.

CHALLENGES WHEN TRANSITIONING TO E-COURTS

The popularity of a new system depends on its user friendliness, and it is sometimes difficult to anticipate the needs of users at the design stage—in this case, if technicians are not familiar with legal proceedings or if judges are not well-versed in information technology. According to a Korean judge, “The users are the heart of any judicial [information technology] system; to develop any such system efficiently you must know what the people want, what they need.” In other words, a step-by-step approach should gradually implement the desired system. Korea did not go paperless immediately; it started with paper-on-demand to allow users to adapt and then moved to a paperless system.

Despite the system’s sophistication, Korea has a long way to go in changing the mindset of lawyers and court users. Among Korea’s 50 million inhabitants are about 12,500 lawyers, 40% of whom are registered with the system—but only 20%, or approximately 2,500 attorneys use it regularly. In 2012 lawyers filed just over a third of the nearly 1 million cases electronically. Every month more attorneys are using the new system, attracted by its convenience, including:

- 24/7 access to registries and court documents.
- Easier, faster access to information that no longer requires a trip to court.
- Increased transparency because litigants can also access the system.
- Document security, guaranteed by a high-tech information technology system.

Convincing users to transition to e-filing requires training and adjustment on both sides of the electronic platform. It might also require financial incentives. For example, Korea recently cut court fees by 10% for lawyers who use e-filing. An electronic docket viewer that allows lawyers to manage multiple lawsuits in different jurisdictions was also implemented.

Another challenge was to secure funding to maintain and enhance the system. Korea invested about $20 million in developing the e-court system, and about as much will be needed to integrate new features by 2015. Maintenance fees and data preservation cost about $30 million a year. In 2012, of the $1.8 billion budget for the Korean judiciary, $180 million went to information and communication technology.

The return on investment from computerizing the judiciary cannot be quantified in a single way. Research on courts in the U.S. state of New York found that reducing the need to travel to a courthouse and eliminating the requirement to serve the opposing party could save $75–95 for each document. Given the number of cases e-filed per year, the savings are significant. E-courts can also help level the playing field between small and large law firms, especially because small firms have fewer staff and benefit more from not having to visit courthouses.

FUNCTIONS OF THE E-COURT SYSTEM

Approaches to e-courts vary by economy depending on the priorities of the judiciary. The tools available to court users in Korea have regularly expanded (table 9.1). The system now mainly encompasses features dedicated to help judges (case management system and judge support system), facilitate the filing of cases for litigants (e-filing) and inform the public (publication of cases).

In the two months after the launch of the e-filing system for civil cases approximately 5% were filed electronically. This

TABLE 9.1 Korea’s courts have a range of features and support systems

<table>
<thead>
<tr>
<th>Case Management System</th>
<th>E-courts System</th>
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<td>• Docket System</td>
<td>• E-Courts System</td>
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<td>• Case Allocation System</td>
<td>• Electronic Money Claim</td>
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<tr>
<td>• Case Filing System</td>
<td>• Standard E-Courtroom</td>
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<td>• Calendaring System</td>
<td>• Electronic Enlisting</td>
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<td>• Service System</td>
<td>• Electronic Property Inquiry</td>
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<tr>
<td>• Payment System</td>
<td>• Audio Video Recording, Video-Conferencing</td>
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<tr>
<td>• Deposit System</td>
<td>• Common Service System</td>
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<tr>
<td>• Case Files Archiving</td>
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number almost decupled in 18 months (Figure 9.1). In fact, two years later, in June 2013, that share had soared to more than 45%.

To further streamline procedures, a system facilitates payment of all submission fees electronically using credit card or wire transfers at the time of filing. In addition, users are notified by e-mail or text message of any submission of additional documents by the opposing party. And after the case allocation system assigns cases, the designated judge and the attorneys can view all their cases online, including PDFs of all documents filed in a given lawsuit.

Online help centers featuring frequently asked questions and tools for pro se litigants were also created to allow the public to get fast answers on questions about the Supreme Court and its processes.\(^9\)

One of the most important components of these help centers is the self-represented litigation homepage, which provides information and templates needed to file a case and respond to claims of counterparties without the help of a certified lawyer.

For judges, the support system includes four main features:

- The case management system, which allows judges to organize their work based on the status of procedures and to separately manage cases for which special measures are needed.
- “My case history,” which allows judges to track cases they have disposed and the final determination of the cases.
- A scheduling system to organize cases by day, week or month that is integrated with the court registry.
- A writing support system with features such as automatic document formatting, multiple judgment editing in small cases and collaborative decision writing in panel cases. This system automatically creates a draft of the final judgment after the relevant case and desired template have been selected. Once completed, judges enter a digital signature and register the decision in a searchable database of judgments.

By comparison, a 150 gigabyte hard drive costs less than $100 and has storage capacity equivalent to 70 filing cabinets. That many filing cabinets, with the floor space required, cost $22,000.\(^10\) The U.S. National Center for State Courts offers tools to estimate savings from e-courts.\(^15\)

**Security**

Computerized court systems also make archives more secure. Risks such as document loss, files being stolen and archive destruction can be significantly reduced or eliminated. E-filing minimizes the costs of these risks, especially because paper documents can be misfiled or stolen. Though it is possible to recreate court files from litigant copies, this approach is inefficient.

Electronic storage reduces these risks. For instance, an e-filing system can improve file security and confidentiality by making it easier to restrict access to case files or documents sealed by court order. In addition, electronic files can be encrypted, providing additional security.\(^16\)

**Transparency**

E-courts can also enhance transparency. By making judicial decisions more transparent, more trade and investment is likely, fostering economic growth.\(^17\) Publishing the cases rendered in a jurisdiction...
allows attorneys and court users to better understand case law and increases legal predictability. Making decisions available to the public online also helps make judges more accountable because anyone can comment on and assess the quality of decisions. In the United States case information, including docket sheets and filed documents, are provided online for viewing and downloading by attorneys and the public at any time from locations other than the courthouse.

In some countries e-filing systems can also fight corruption. If formal procedures are streamlined and attorneys are no longer required to file claims in person, there is less traffic in courthouses—reducing opportunities for bribery.18

Access to justice
E-court services significantly extend the availability of justice, as with a 24/7 system for filing, registration and auctions.19 Moreover, providing remote access to judges makes the system convenient and efficient. Most systems employ extensive security to mitigate tampering with the integrity of files. Singapore’s system, in addition to providing full remote access to judges, has a “pack and go” feature that allows court files to be transferred to CD-ROMs or USB memory devices for offline use.

E-courts can also aid cases where geographic distance makes it difficult for parties to attend, making videoconferencing a pragmatic solution. While some trials last only about 30 minutes, advocates often must spend a lot of time traveling. Thus videoconferencing saves time and money. In the United States, it was estimated that about $900 could be saved per trial by not having to pay for transport fares, accommodations and related allowances. In other economies poor infrastructure makes it difficult to travel between cities, justifying an investment in such information technology.

SHARING GOOD PRACTICES THROUGH PEER LEARNING
According to Doing Business, in Seoul resolving a standard contract enforcement dispute takes 230 days, 33 procedures and costs 10% of the claim—making Korea the runner-up in Doing Business’s ease of enforcing contracts ranking. By contrast, it takes 400 days, 36 procedures and 29% of the value of the claim in Vietnam; 842 days, 37 procedures and 26% of the value of the claim in the Philippines and 622 days, 38 procedures and 35% of the value of the claim globally. Contract enforcement is faster in economies with e-filing (figure 9.2).

Concerns about budget and technology limitations are among the most common reasons for not implementing e-court features.20 That should not prevent less developed economies from looking into e-courts. E-courts can be implemented with donor assistance, and reforms can be inspired by peer learning from leading economies.

Malaysia, with an income per capita half that of Korea’s, has been implementing an ambitious upgrade of the computerization of its courts. In late 2008, with the appointment of a new chief justice, Malaysia initiated reforms targeting judicial delays and court backlogs that included two information technology contracts totaling $43 million. The program introduced court recording and transcription equipment and launched an e-filing system and electronic case management system that automated manual processes, provided courts with registries of case filings and events and introduced modules to handle e-filing, schedule hearings and the like. The new equipment is expected to expedite hearings and reduce back office processing.21

Rwanda and Tanzania, two countries with income per capita below $1,000, have also started computerizing their courts. Tanzania’s project received funds from several donors and provided the judiciary with modern information technology—including computers and digital court recording equipment—and training for judges and staff. Computerization has had many benefits, such as improving the quality of research by judges.22 Rwanda’s Strategic Plan of the Supreme Court has recruited new court officers well trained in the use of information technology. Thanks to donor funds, the country now has an e-filing system, electronic records management system and legal information portal.23 According to data collected for Doing Business 2014, Rwanda and Tanzania are top performers in Sub-Saharan Africa in the ease of enforcing contracts ranking.

FIGURE 9.2 Globally, contract enforcement is faster in economies with e-filing

<table>
<thead>
<tr>
<th>Country</th>
<th>OECD</th>
<th>EAP</th>
<th>ECA</th>
<th>LAC</th>
<th>MENA</th>
<th>SSA</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea, Rep.</td>
<td>230</td>
<td>1,185</td>
<td>842</td>
<td>635</td>
<td>731</td>
<td>524</td>
<td>1,010</td>
</tr>
<tr>
<td>Italy</td>
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<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Singapore</td>
<td>195</td>
<td>230</td>
<td>635</td>
<td>524</td>
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<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Philippines</td>
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<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Uzbekistan</td>
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<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Serbia</td>
<td>195</td>
<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Brazil</td>
<td>195</td>
<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Guatemala</td>
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<td>230</td>
<td>456</td>
<td>1,296</td>
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<tr>
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<td>524</td>
<td>230</td>
<td>456</td>
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<tr>
<td>Egypt, Arab Rep.</td>
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<td>456</td>
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<tr>
<td>Rwanda</td>
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<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Angola</td>
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<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
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</tr>
<tr>
<td>With e-filing</td>
<td>195</td>
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<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
<tr>
<td>Without e-filing</td>
<td>195</td>
<td>230</td>
<td>635</td>
<td>524</td>
<td>230</td>
<td>456</td>
<td>1,296</td>
</tr>
</tbody>
</table>

Note: OECD = OECD high income; EAP = East Asia and the Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SSA = Sub-Saharan Africa.

Source: Doing Business database.
Through its involvement in the Asia-Pacific Economic Cooperation forum, Korea has helped improve the region’s business regulations. Korea, named a “champion” in judicial reform by APEC, has invested significant resources to help countries such as Indonesia, Peru, the Philippines and Thailand improve contract enforcement. A Korean delegation visited partner economies in 2011 to review systems and procedures for enforcing contracts and proposed reforms based on its experience in expediting court proceedings. In addition, peer-learning events were held to focus on improving such systems. Together these events attracted more than 200 participants, including judges, attorneys, professors and government officials. In addition, in 2011 the Korean government brought together legal experts and high-level policy makers to discuss the future of those economies’ systems for enforcing contracts.

LESSONS

Experiences with e-courts in Korea and elsewhere show that:

- The system must be user friendly and adapt in response to comments from users; a thorough needs analysis is required.
- The information technology budget should take into account costs of data preservation and system maintenance.
- Users should receive adequate training.
- Cases covering various subject matter should be integrated.
- Systems in other economies can offer useful guidance.

NOTES

This case study was written by Julien Vilquin and Erica Bosio.

2. Kingston (2000) found that only about 20% of the responding small and medium-size enterprises using courts to defend their patents actually went to trial.
3. Dabla-Norris and Inchauste Comboni 2008; Safavian and Sharma (2007), in a study on Eastern Europe, found that in economies with slower courts, firms tend to have less bank financing for new investments. Duval and Utkhatham (2009) found that simplifying contract enforcement procedures increases bilateral trade.
4. UNDESA 2012.
5. Interview with Korean Judge Hoshin Won, who has been active in promoting e-courts.
6. Ibid.
7. Pfau 2011. A conservative estimate for New York, with $40 in savings for each document and 4 million cases filed electronically each year, would save the private sector and government hundreds of millions of dollars a year.
9. Pro se legal representation means advocating on one’s behalf rather than being represented by a lawyer.
11. This amount is the result of calculations provided to the Doing Business team by the Supreme Court of Korea.
13. Ibid.
18. Dzankov, La Porta and others 2003.