



# Paying taxes

## Trends before and after the financial crisis

**T**axes matter for the economy. They provide the sustainable funding needed for social programs and public investments to promote economic growth and development and build a prosperous and orderly society. But policy makers face a difficult challenge in formulating good tax policies: they need to find the right balance between raising revenue and ensuring that tax rates and the administrative burden of tax compliance do not deter participation in the system or discourage business activity. This balancing act is intensified during periods of crisis. In an economic downturn some categories of public spending may automatically rise, putting pressure on deficits. Governments may at times need to deliver tax-based stimulus packages while also providing reassurance to markets that deficits will be reversed and public debt contained.

### WHY TAX POLICY MATTERS DURING CRISES

The global financial crisis of 2008–09 had a dramatic impact on national tax revenue and led to a sharp increase in deficits and public debt. The decline in revenue began in 2008, when general government revenue fell by an average of 0.7% of GDP worldwide. Revenue declined by another 1.1% of GDP in 2009.<sup>1</sup> The financial crisis led to a shrinking of economic activity and trade in most economies.

Fiscal measures were part of the policy toolkit that governments brought to bear in supporting the recovery. Policy makers in most economies applied measures aimed at improving revenue collection while keeping the taxes levied on businesses and households as low as possible, trying to strike a balance between reducing the disincentive effects of high taxes and generating adequate resources to fund essential expenditures.<sup>2</sup> Governments generally reduced the rates and broadened the base for corporate income tax while increasing the rates for the consumption tax or value added tax (VAT).<sup>3</sup>

In the European Union, for example, most member countries raised personal income tax rates—often temporarily, through general surcharges or through solidarity contributions from high-income earners. In addition, several EU members reduced their corporate income tax rate and changed corporate tax bases. Most of these changes were aimed at providing tax relief for investment in physical capital or research and development (R&D) while limiting the deductibility of other items. By contrast, EU members commonly increased VAT rates along with statutory rates for energy and environmental taxes and for alcohol and tobacco taxes.<sup>4</sup> Some governments opted to broaden the VAT base by applying VAT to goods and services that had previously been subject to a zero rate and levying the standard VAT rate on products that had had a reduced VAT rate.<sup>5</sup> Unifying VAT rates

- Over the 9-year period ending in 2012, the global average total tax rate as measured by *Doing Business* fell by 9.1 percentage points. Its rate of decline was fastest during the global financial crisis period (2008–10), averaging 1.8 percentage points a year, then started slowing in 2011.
- The average profit tax rate dropped sharply during the crisis period and then started to increase slightly in 2012. The average rate for labor taxes and mandatory contributions was stable throughout the 9-year period.
- The administrative burden of tax compliance has been steadily easing since 2004 with the growing use of electronic systems for filing and paying taxes.
- During the financial crisis there was an increase in the number of tax reforms. The pace of reform accelerated with the onset of the crisis, then slowed in subsequent periods.

across all goods and services increases revenue and reduces compliance and administrative costs.<sup>6</sup>

Along with falling revenue, the global financial and economic crisis also led to growing tax compliance risks in some economies. Compliance with tax obligations and collection of tax revenue are important to support social programs and services, for example. But in an economic downturn businesses tend to underreport tax liabilities, underpay the taxes due, fail to file their tax returns on time and even engage in transactions in the informal sector.<sup>7</sup> Many economies redesigned their tax systems during that period with the objective of easing compliance with tax obligations.

## BEFORE AND AFTER THE CRISIS—A 9-YEAR GLOBAL TAX PROFILE

*Doing Business* has been monitoring how governments tax businesses through its paying taxes indicators for 9 years, looking at both tax administration and tax rates. The data give interesting insights into the tax policies implemented during the financial crisis of 2008–09. *Doing Business* looks at tax systems from the perspective of the business, through 3 indicators.

The total tax rate measures all the taxes and mandatory contributions that a standardized medium-size domestic company must pay in a given year as a percentage of its commercial profit.<sup>8</sup> These taxes and contributions include corporate income tax, labor taxes and mandatory contributions, property taxes, vehicle taxes, capital gains tax, environmental taxes and a variety of smaller taxes. The taxes withheld (such as personal income tax) or collected by the company and remitted to the tax authorities (such as VAT) but not borne by the company are excluded from the total tax rate calculation.

Two other indicators measure the complexity of an economy's tax compliance system. The number of payments reflects the total number of taxes and contributions paid, the method of payment, the frequency of filing and payment, and the number of agencies involved. The time indicator measures the hours per year required to comply with 3 major taxes: corporate income tax, labor taxes and mandatory contributions, and VAT or sales tax.

The indicators show that for businesses around the world, paying taxes became easier and less costly over the 9 years from 2004 through 2012.

### Falling tax cost for businesses

Globally, the total tax rate for the *Doing Business* case study company averaged 43.1% of commercial profit in 2012.<sup>9</sup> Over the 9-year period ending that year, the average total tax rate fell by 9.1 percentage points—around 1 percentage point a year. Its rate of decline was fastest during the crisis period (2008–10), averaging 1.8 percentage points a year, then started slowing in 2011. The total tax rate fell

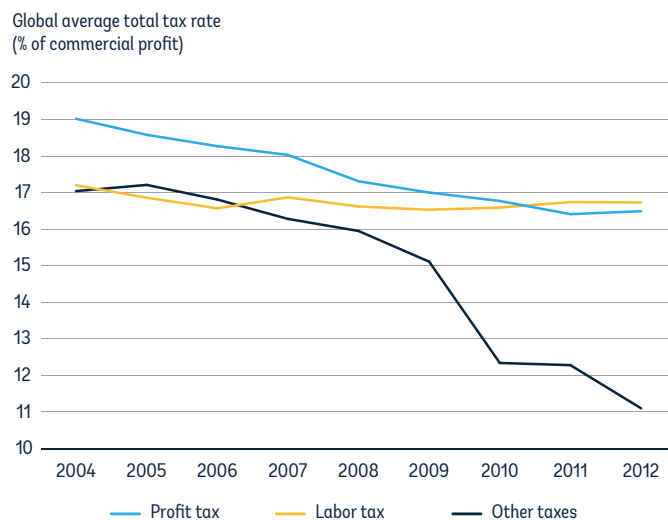
by an average of 0.3 percentage points in 2011.

The average rate for all 3 types of taxes included in the total tax rate—profit, labor and “other” taxes—also fell over the 9 years (figure 10.1).<sup>10</sup> “Other” taxes decreased the most, by 5.9 percentage points—followed by profit taxes (2.7 percentage points) and labor taxes (0.5 percentage points).

The main driver of the drop in “other” taxes was the replacement of the cascading sales tax with VAT by a number of economies, many of them in Sub-Saharan Africa. Seven economies made this change during the 9 years, 6 of them during the crisis period.<sup>11</sup> This shift substantially reduces the tax cost for businesses: while a cascading sales tax is a turnover tax applied to the full value at every stage of production, a VAT is imposed only on the value added at each stage, and the final consumers bear the burden.

While the total tax rate fell in all regions over the 9-year period, Sub-Saharan Africa had the biggest

FIGURE 10.1 A global trend of steady decline in the total tax rate



Note: The data refer to the 174 economies included in DB2006 (2004). The Bahamas, Bahrain, Barbados, Brunei Darussalam, Cyprus, Kosovo, Liberia, Libya, Luxembourg, Malta, Montenegro, Myanmar, Qatar, San Marino and South Sudan were added in subsequent years.

Source: *Doing Business* database.

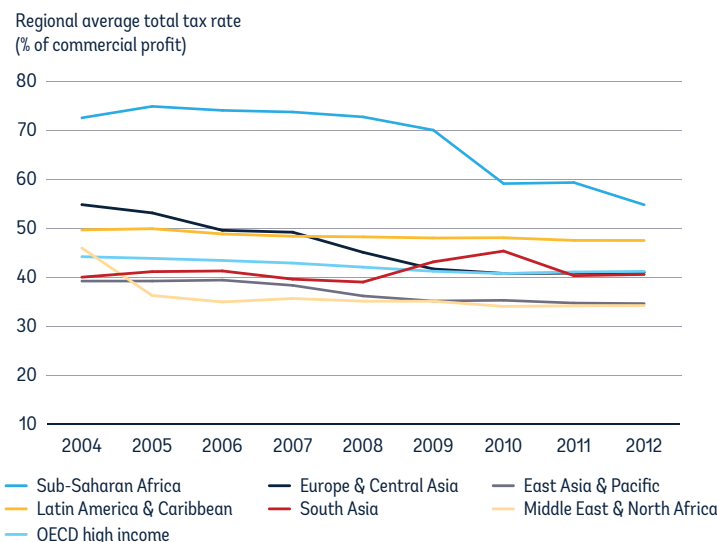
decline. Its average total tax rate dropped by almost 17 percentage points between 2004 and 2012. This aligned the region more closely with the rest of the world, though its average total tax rate still remains the highest, at 53.4% in 2012 (figure 10.2).<sup>12</sup> In addition, many African economies lowered rates for the profit tax, reducing its share in the total tax rate. The size of the tax cost for businesses matters for investment and growth. Where taxes are high, businesses are more inclined to opt out of the formal sector. Given the disincentive effects associated with very high tax rates, the continual decline in the total tax rate has been a good trend for Africa.

Other economies introduced new taxes during the 9-year period. For example, in 2010 Hungary introduced a sector-specific surtax on business activity in retail, telecommunications and energy supply. The new tax remained in force until December 31, 2012. In 2009 Romania introduced a minimum income tax. Also in 2009, the Kyrgyz Republic introduced a new real estate tax that is set at 14,000 soms (about \$270) per square meter and further adjusted depending on the city location, the property’s location within the city and the type of business.

The average profit tax rate in most economies fell consistently between 2004 and 2010, dropping most sharply during the crisis period (2008–10), and then started to increase slightly in 2011 and 2012. The average rate for labor taxes and mandatory contributions remained stable throughout the 9-year period regardless of the financial crisis. In several economies this reflects concerns on the part of the authorities about the impact of aging populations and the need to strengthen the financial situation of pension systems.

The 9-year trends for the 3 types of taxes included in the total tax rate are

**FIGURE 10.2** Among regions, Sub-Saharan Africa had the biggest reduction in the total tax rate



Note: The data refer to the 174 economies included in DB2006 (2004). The Bahamas, Bahrain, Barbados, Brunei Darussalam, Cyprus, Kosovo, Liberia, Libya, Luxembourg, Malta, Montenegro, Myanmar, Qatar, San Marino and South Sudan were added in subsequent years.  
Source: *Doing Business* database.

**BOX 10.1 Using technology to make tax compliance easier**

Rolling out new information and communication technologies for filing and paying taxes and then educating taxpayers and tax officials in their use are not easy tasks for any government. But electronic tax systems, if implemented well and used by most taxpayers, benefit both tax authorities and firms. For tax authorities, electronic filing lightens workloads and reduces operational costs such as for processing, handling and storing tax returns. This allows administrative resources to be allocated to other tasks, such as auditing or providing customer services.

Electronic filing is also more convenient for users. It reduces the time and cost required to comply with tax obligations and eliminates the need for taxpayers to wait in line at the tax office.<sup>a</sup> It also allows faster refunds. And it can lead to a lower rate of errors.

Electronic systems for filing and paying taxes have become more common worldwide. Of the 314 reforms making it easier or less costly to pay taxes that *Doing Business* has recorded since 2004, 88 included the introduction or enhancement of online filing and payment systems. These and other improvements to simplify tax compliance reduced the administrative burden to comply with tax obligations. By 2012, 76 economies had fully implemented electronic systems for filing and paying taxes as measured by *Doing Business*. OECD high-income economies have the largest representation in this group.

a. Bird and Zolt 2008.

reflected in the changing composition of this rate. On average, labor taxes and mandatory contributions account for the largest share of the global total

tax rate today, having risen from 32% of the total tax rate in 2004 to almost 38% in 2012. The profit tax share rose slightly, while “other” taxes fell from

**FIGURE 10.3** The administrative burden of compliance has eased for all types of taxes

Note: The data refer to the 174 economies included in DB2006 (2004). The Bahamas, Bahrain, Barbados, Brunei Darussalam, Cyprus, Kosovo, Liberia, Libya, Luxembourg, Malta, Montenegro, Myanmar, Qatar, San Marino and South Sudan were added in subsequent years.

Source: *Doing Business* database.

32% of the total in 2004 to only 25% in 2012.

### Easing of the tax administrative burden

To comply with tax obligations in 2012, the *Doing Business* case study company would have made 26.7 payments and put in 268 hours (nearly 7 weeks) on average. This reflects an easing of the administrative burden—with 7 fewer payments and 62 fewer hours than in 2004.

Consumption taxes have consistently been the most time consuming, requiring 106 hours in 2012, with labor taxes and mandatory contributions not far behind (figure 10.3). Corporate income tax takes the least time. While corporate income tax can be complex, it often requires only one annual return. Labor and consumption taxes are often filed and paid monthly and involve repetitive calculations for each employee and transaction. And consumption taxes in the form of VAT require filing

information on both input and output ledgers.

The administrative burden for all the types of taxes eased over the 9 years. But it eased the most for labor taxes and mandatory contributions, with the time for compliance dropping by 23 hours on average and the number of payments by 4. This is thanks mainly to the introduction of electronic systems for filing and paying taxes and to administrative changes merging the filing and payment of labor taxes levied on the same tax base into one return and one payment. For labor and consumption taxes, with their requirements for repetitive calculations, the use of accounting software and electronic filing and payment systems can offer great potential time savings (box 10.1).

In contrast to the total tax rate, the time for compliance declined the most just before the onset of the financial crisis for all 3 types of taxes: profit tax, labor tax and consumption taxes. The number of payments decreased steadily over the 9-year period.

## PATTERNS IN TAX REFORMS DURING THE CRISIS PERIOD

Over the 9-year period ending in 2012, tax reforms peaked in 2008. *Doing Business* recorded 118 changes implemented that year making it easier or less costly to pay taxes (figure 10.4).<sup>13</sup> The pace of reform slowed in the period immediately after the crisis: in 2011 *Doing Business* recorded only 43 such changes.

### Changes making it easier or less costly to pay taxes

During the crisis period (2008–10) the most common changes affecting the paying taxes indicators were those cutting the corporate income tax rate (figure 10.5). *Doing Business* recorded 58 such changes during the 3-year

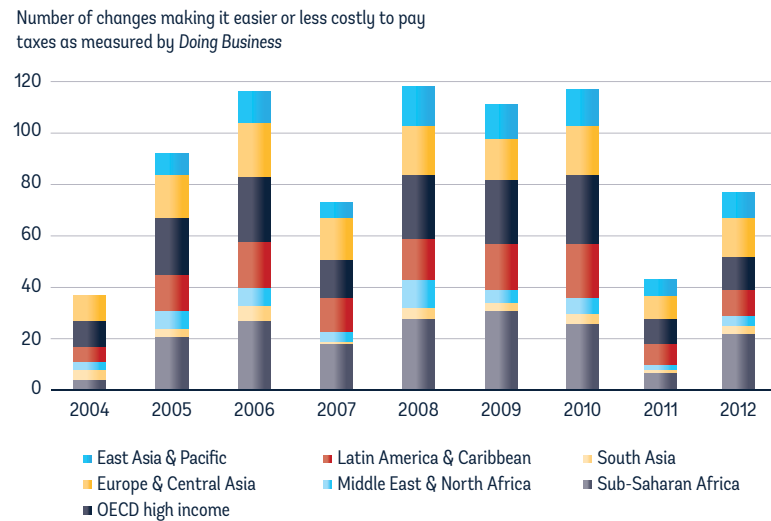
period. The next most common changes were those enhancing or introducing electronic systems for filing and paying taxes online—38 such changes were reported in total. These were aimed at easing the administrative burden of tax compliance to counter the greater risk of tax evasion during economic downturns. Also common were changes to tax deductibility and depreciation rules that would respectively lower the tax cost for businesses and provide them with greater flexibility in planning their cash flow (with a total of 33 recorded).

Reducing the corporate income tax rate was a change that many governments made during the financial crisis (box 10.2). In 2008–10 around 47 economies cut their rates. Moldova temporarily reduced its rate from 15% to 0%, effectively eliminating any tax on profits in 2008–11, then set the rate at 12% from January 1, 2012. Some economies (Canada, Fiji, Greece, Indonesia, Slovenia, the United Kingdom) reduced their rates gradually, over several years. Others introduced temporary additional rate reductions. Vietnam cut its corporate income tax rate from 25% to 17.5% in 2009 as part of a stimulus package for small and medium-size businesses, then restored the standard rate for the following year.

Other economies abolished their minimum income tax (France, Timor-Leste). Romania, having introduced a minimum income tax in May 2009, abolished it in October 2010. Some economies amended their income tax brackets rather than reducing rates. Portugal introduced tax brackets for profit tax in January 2009. Taxable corporate income up to €12,500 became subject to half the standard tax rate, while all income over this amount was taxed at the standard 25% rate.

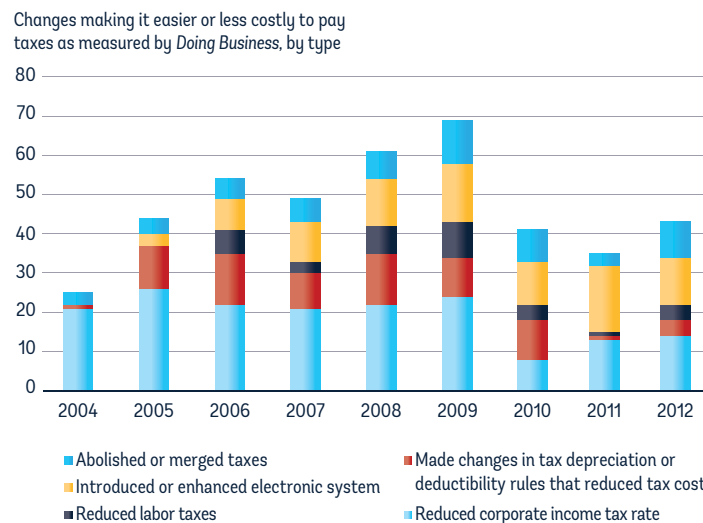
To stimulate investment in specific areas, some economies increased the percentage of allowance that could be applied on certain assets or allowed the

**FIGURE 10.4 An accelerating pace of tax reform during the global financial crisis**



Note: The data refer to the 174 economies included in DB2006 (2004). The Bahamas, Bahrain, Barbados, Brunei Darussalam, Cyprus, Kosovo, Liberia, Libya, Luxembourg, Malta, Montenegro, Myanmar, Qatar, San Marino and South Sudan were added in subsequent years. The changes shown for each year are those recorded from June 1 of that year to June 1 of the following year.  
Source: Doing Business database.

**FIGURE 10.5 During the crisis period many economies cut the corporate income tax rate while continuing to improve tax administration**



Note: The data refer to the 174 economies included in DB2006 (2004). The Bahamas, Bahrain, Barbados, Brunei Darussalam, Cyprus, Kosovo, Liberia, Libya, Luxembourg, Malta, Montenegro, Myanmar, Qatar, San Marino and South Sudan were added in subsequent years. The changes shown for each year are those recorded from June 1 of that year to June 1 of the following year. The figure does not show all types of changes making it easier or less costly to pay taxes recorded by Doing Business.  
Source: Doing Business database.

deduction of more expenses. Thailand, for example, encouraged capital investment with accelerated depreciation for equipment and machinery acquired before December 2010. Australia

introduced an investment allowance—an up-front deduction of 30% of the cost of new plant contracted for between January 1, 2009, and June 30, 2009, and installed by June 30,

**BOX 10.2 The Republic of Korea—a comprehensive approach to supporting an economy in recession**

The 2008 global credit crunch and ensuing economic recession hit Korea hard. Heavily dependent on manufactured exports and closely integrated with other developed markets through both trade and financial links, the Korean economy contracted sharply in 2009 and public finances came under pressure. Reflecting diminished confidence in the short-term outlook, the value of the Korean won fell sharply. This helped lead to rapid consideration of a package of measures aimed at putting in place the conditions for a recovery.

The government set priorities for tax policy: supporting low- and middle-income taxpayers, facilitating job creation, promoting investment and sustainable growth, rationalizing the tax system and ensuring the sustainability of public finances.<sup>a</sup> Measures to support low- and middle-income taxpayers included changes in both individual and corporate taxation (such as a special tax credit for small and medium-size enterprises). To support the continuation of family businesses, the government reduced the inheritance tax and allowed deductions of up to 10 billion won (about \$10 million) when a small or medium-size enterprise is inherited, extending this to 50 billion won (about \$50 million) in 2014. To help self-employed individuals who were forced to close their businesses in 2009, the government offered an exemption from paying delinquent taxes until the end of 2010 for those starting a new business or getting a new job. The exemption was further extended until the end of 2014. To support local business development, it gave a corporate income tax deduction of 100% for the first 5 years and 50% for the next 2 years to companies relocating to Korea from abroad. To support future growth, it introduced R&D incentives for companies and also increased the deductibility of education expenses for individuals.

Korea also accelerated the implementation of some tax changes already in the pipeline. It reduced the corporate income tax rate for taxable income below 200 million won (\$197,972) from 13% to 11% in 2008 and to 10% starting in 2010. For the upper bracket (above 200 million won) it reduced the rate from 25% to 22% in 2009 and to 20% in 2010 and thereafter. Korea reduced the personal income tax rate by 1 percentage point for the middle bracket and by 2 percentage points for the top bracket while also increasing allowable deductions.

In addition, Korea strengthened tax compliance regulation, imposing penalties on high-income earners for failure to issue cash receipts and introducing more severe punishment for frequent and high-profile tax evaders. It also increased the statute of limitation for prosecution for certain tax crimes.

Supporters of Korea's approach believe that it enabled the country to recover faster and more strongly from the global crisis than most other OECD countries.<sup>b</sup> Korea was one of only a handful of OECD countries that actually registered a reduction in public debt levels over the period 2009–13. Most other advanced economies saw rapid increases in public indebtedness as a result of policy interventions to deal with the effects of the financial crisis.<sup>c</sup>

a. Korea, Ministry of Strategy and Finance 2012.

b. OECD 2012.

c. International Monetary Fund, World Economic Outlook Database.

2010. Austria introduced accelerated depreciation (30% for the first year) for tangible fixed assets produced or acquired within a specified time period. Spain introduced unlimited tax depreciation for investments made in new fixed assets and immovable property in 2009 and 2010, later extending this to investments made before December 31, 2012.

### Changes making it more complex or costly to pay taxes

Some economies introduced new taxes (16 in total in 2008–10). These were mostly small taxes such as environmental taxes, vehicle taxes, road taxes and other social taxes. Finland

increased energy taxes while cutting the income tax rate during the recession. In 2011 Italy raised VAT and local property tax rates, though it also cut labor and corporate income tax rates. In 2010 Pakistan increased the VAT rate from 16% to 17% and raised the minimum tax rate from 0.5% to 1% levied on turnover.

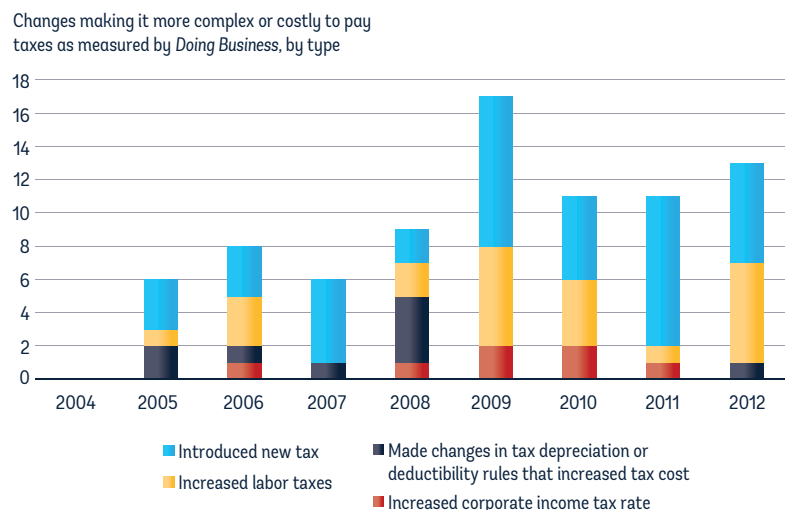
Other tax changes involved increases in labor taxes and mandatory contributions borne by the employer (figure 10.6). Estonia increased the unemployment insurance contribution rate twice during 2009, from 0.3% to 1% on June 1, 2009, and to 1.4% on August 1, 2009. Iceland increased the social security

contribution rate for employers from 5.34% to 7% in July 2009—and the pension contribution rate from 6% to 7%.

## CONCLUSION

The financial crisis had a substantial impact on national tax revenue, leading in many economies to larger government deficits and higher levels of public debt. This may have helped trigger efforts to redesign tax systems, with governments aiming to strike the right balance between raising additional revenue and avoiding a greater tax burden on businesses.

**FIGURE 10.6** Among other changes to tax systems during the crisis period, those introducing new taxes were the most common



Note: The data refer to the 174 economies included in DB2006 (2004). The Bahamas, Bahrain, Barbados, Brunei Darussalam, Cyprus, Kosovo, Liberia, Libya, Luxembourg, Malta, Montenegro, Myanmar, Qatar, San Marino and South Sudan were added in subsequent years. The changes shown for each year are those recorded from June 1 of that year to June 1 of the following year. The figure does not show all types of changes making it more complex or costly to pay taxes recorded by *Doing Business*.

Source: *Doing Business* database.

The data collected for the paying taxes indicators show a clear trend of increasing changes to tax policies during the crisis. Among the most common changes as measured by the indicators were those cutting the corporate income tax rate while increasing VAT rates and those enhancing or introducing electronic systems for filing and paying taxes. Changes easing the administrative burden of tax compliance countered the greater risk of tax evasion that arises during economic downturns. In addition, governments introduced new tax deductibility and depreciation rules that would lower the tax cost for businesses, provide them with greater flexibility in planning their cash flow and stimulate investment in specific areas.

**NOTES**

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1. World Bank, World Development Indicators database.
2. OECD 2010b.

transfer fees, taxes on checks and cascading sales tax.

11. The 7 economies are Burundi, the Democratic Republic of Congo, Djibouti, The Gambia, the Seychelles, Sierra Leone and the Republic of Yemen.
12. This is the average for all Sub-Saharan African economies included in *Doing Business 2013* (45 in total).
13. These reforms include both major and minor reforms as classified by *Doing Business*. These include changes in statutory rates, changes in deductibility of expenses and depreciation rules, administrative changes affecting time to comply with 3 major taxes (corporate income tax, labor taxes and mandatory contributions, and VAT or sales tax) and introduction or elimination of taxes. Under the paying taxes methodology, the tax system assessment for calendar year 2008 covers reforms recorded from June 1, 2008, to June 1, 2009, a period that includes the start of the financial crisis in September 2008 and the months immediately following it.

3. Buti and Zourek 2012.
4. Buti and Zourek 2012.
5. Buti and Zourek 2012.
6. OECD 2010a.
7. Brondolo 2009.
8. Commercial profit is net profit before all taxes borne. It differs from the conventional profit before tax, reported in financial statements. In computing profit before tax, many of the taxes borne by a firm are deductible. In computing commercial profit, these taxes are not deductible. Commercial profit therefore presents a clear picture of the actual profit of a business before any of the taxes it bears in the course of the fiscal year. It is computed as sales minus cost of goods sold, minus gross salaries, minus administrative expenses, minus other expenses, minus provisions, plus capital gains (from the property sale) minus interest expense, plus interest income and minus commercial depreciation. To compute the commercial depreciation, a straight-line depreciation method is applied, with the following rates: 0% for the land, 5% for the building, 10% for the machinery, 33% for the computers, 20% for the office equipment, 20% for the truck and 10% for business development expenses. Commercial profit amounts to 59.4 times income per capita.
9. This is an unweighted average across 189 economies.
10. The terms *profit tax* and *corporate income tax* are used interchangeably in this case study. "Other" taxes include small taxes such as vehicle taxes, environmental taxes, road taxes, property taxes, property