

### BOX 2.3.1 Informality in Latin America and the Caribbean

*Informal sector output in Latin America and the Caribbean, equivalent to about one-third of GDP, is slightly higher than in the median emerging market and developing economy, despite a steady decline during recent decades. Roughly six out of ten of those employed in the region are employed informally. Informality has been associated with lower growth, weaker productivity, and higher levels of inequality. Policies to reduce payroll taxes and increase labor inspections have been found to reduce informality.*

#### Introduction

Informality in Latin America and the Caribbean (LAC) during the past decade was slightly higher than in the median emerging market and developing economy (EMDE), whether measured in terms of informal output or the share of self-employment (Figure 2.3.1.1; Box 3.2). Yet there is substantial heterogeneity in the incidence of informality within the region. Informality tends to be higher in countries with poorer institutional environments.

Against this backdrop, this box addresses the following questions:

- How has informality evolved in Latin America and the Caribbean?
- What have been the macroeconomic and social correlates of informality?
- What policy options are available to address challenges associated with informality?

#### Evolution and drivers of informality

**Moderate informality.** On average, the informal economy in LAC was equivalent to 34 percent of official GDP in 2016, slightly above the median EMDE.<sup>1</sup> Informal employment averaged 62 percent of total employment in 2016 (slightly below the EMDE median), while 38 percent of those employed were self-employed. Within the region, informality varies considerably.

**Regional heterogeneity.** The amount of output generated by the informal sector (output informality) ranged from 16 percent of GDP in Chile, in line with rates observed in advanced economies, to 56 percent in Bolivia. Haiti also has very high informality, at 61 percent of GDP.<sup>2</sup> Survey-based measures of labor informality show a similarly wide range. For Caribbean countries with available data, self-

employment as a share of formal employment tends to be very low: 12 percent in Suriname (2014), 14 percent in The Bahamas (2011), and 17 percent in Barbados (2013). Again, Bolivia appears at the top end of the spectrum, with self-employment equivalent to 64 percent of formal employment in 2015. In most countries, labor informality is higher than output informality, although Brazil, Guatemala, and several Caribbean countries are exceptions.

**Trend decline in output informality.** Output informality in the region has steadily declined since the early 2000s (Figure 2.3.1.2). Several of the countries with the highest incidence of output informality (e.g., Bolivia, Panama, Peru) have also experienced some of the largest declines during the past two decades, in part due to rapid formal job creation in the context of strong output growth. Yet even where labor informality has fallen, the decline did not necessarily affect all workers equally. In Argentina and Brazil, two of the largest economies in LAC, middle-aged men, the highly skilled, and those working full time were the most likely to shift from informal to formal employment during the 2000s (Maurizio 2015). Moreover, the decline in output informality has not always been accompanied by a similar decline in labor informality, which has been persistently high in countries such as Bolivia, Colombia, Honduras, Jamaica, Nicaragua, and Peru.

#### Correlates of informality

Informality has been associated with weak institutions and business climates as well as poor macroeconomic, microeconomic, and social outcomes in LAC. These include lower output and productivity growth, weaker financial resilience of households, and greater poverty.

**Weak governance and business climates.** Most of the institutional factors associated with informality are at or slightly above the EMDE average in LAC. However, LAC economies with below-average institutional quality have also tended to be those with high informality. For instance, Peru's higher labor informality compared to

Note: This box was prepared by Dana Vorisek. Research assistance was provided by Brent Harrison and Jinxin Wu.

<sup>1</sup> Output informality based on DGE estimates of Elgin and Oztunali (2014), unless otherwise specified.

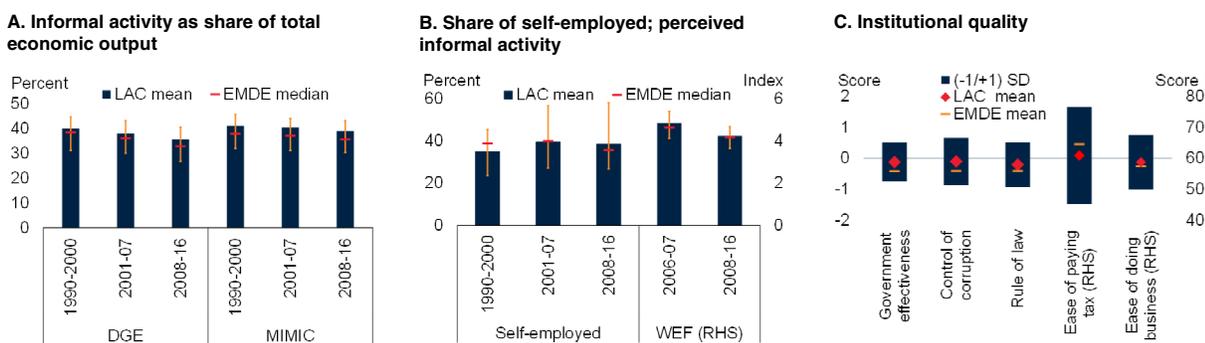
<sup>2</sup> For lack of data on DGE estimates, this figure refers to MIMIC estimates (Chapter 3). DGE and MIMIC estimates are similar at the country level.

<sup>3</sup> Dougherty and Escobar (2013); Estevão and de Carvalho Filho (2012); Loayza (1997); Loayza, Servén, and Sugawara (2010); Vuletin (2008).

### BOX 2.3.1 Informality in Latin America and the Caribbean (continued)

#### FIGURE 2.3.1.1 Informality in Latin America and the Caribbean

Output-based informality in LAC has fallen since the 1990s, on average, yet remains above the median in EMDEs. Employment-based informality in the region has risen slightly, to about the EMDE median. The key institutional factors that are often associated with informality, other than the difficulty of paying taxes, are slightly better in LAC than in all EMDEs.



Sources: Elgin et al. (forthcoming), Eurostat; Haver Analytics, Inter-American Development Bank, national statistical bureaus and offices, Organisation for Economic Co-operation and Development, World Bank (Doing Business, World Development Indicators, and World Governance Indicators).

A.-C. Blue bars show simple averages of economies in the region. Red markers show the median of all EMDEs. Vertical lines denote interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model. MIMIC = multiple indicators multiple causes model. The DGE model estimates the size of the informal sector as a percent of official GDP (see Elgin and Oztunali 2012). The MIMIC model is a structural equations model that considers multiple causes of informal activity and captures multiple outcome indicators of informal activity (see Schneider, Buehn, and Montenegro 2010). It also estimates the informal output as a percent of official GDP. DGE sample includes 26 LAC economies and 122 EMDEs; MIMIC sample includes 25 LAC economies and 124 EMDEs.

B. Self-employed is presented as the share of self-employment in total employment. WEF = World Economic Forum. WEF index is the average response at the country-year level to the question: "In your country, how much economic activity do you estimate to be undeclared or unregistered? (1 = Most economic activity is undeclared or unregistered; 7 = Most economic activity is declared or registered)." WEF index is inverted; a higher average at the country level indicates a larger informal economy. The index does not use data for 2004–05 due to inconsistency in survey methods. The WVS asks whether respondents can justify cheating on taxes (1 = never justifiable; 10 = always justifiable). The average responses at the country-year level are used as a measure of attitude toward informality (or tax morality; Oviedo, Thomas, and Karakurum-Ozdemir 2009). Self-employed sample includes 32 LAC economies and 134 EMDEs; WEF sample includes 25 LAC economies and 114 EMDEs.

C. All measures are taken from the latest year available. The first three institutional measures are taken from World Bank's World Governance Indicators (2017), with a higher value indicating better institutional quality in 2016. The "ease of doing business" and "ease of paying taxes" are taken from World Bank's Doing Business database and measured as distance to frontier, with a higher value indicating a more favorable business environment. Sample includes 32 LAC economies and 149 EMDEs.

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Chile has been mostly attributed to poor governance (Loayza and Wada 2010a). One of the most common explanations for informality in LAC countries has been restrictive business and labor regulations, which discourage firms from entering the formal sector.<sup>3</sup>

**High tax burdens.** High tax rates or burdensome tax regulations have also encouraged informality in the region (Loayza 1997; Ordóñez 2014; Vuletin 2008). Both corporate and personal income tax rates tend to be higher in LAC than in the average EMDE—indeed, LAC is the only EMDE region where the average personal income tax rate has risen since the early 2000s.

**Trade liberalization amid inflexible labor markets.** Some instances of trade liberalization have also been associated with rising informality in LAC. The reduction of trade barriers in the 1980s and 1990s led to fears that domestic firms in the formal sector would be rendered uncompetitive and shift to the informal sector. In Brazil,

the association between trade liberalization and informality was ambiguous in the early literature (Bosch, Goñi-Pacchioni, and Maloney 2012; Goldberg and Pavcnik 2003; Menezes-Filho and Muendler 2011). However, recent research has established that trade liberalization was followed by increased informality in Brazil, though only in the long run (Dix-Carneiro and Kovak 2017; Dix-Carneiro et al. 2018). In Colombia, trade liberalization was associated with slightly higher informality, yet only prior to a subsequent reform that increased labor market flexibility (Goldberg and Pavcnik 2003).

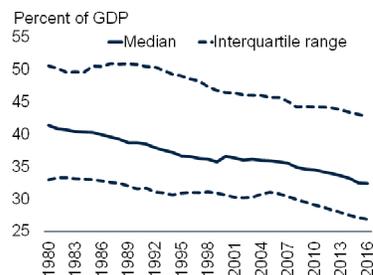
**Sectoral and worker characteristics.** Informality has been shown to be higher in the presence of large agricultural sectors. Other structural factors, such as poor education and skills, have also been identified as underlying reasons for labor informality (Fernandez and Villar 2016). In some LAC countries, a considerable share of people working informally entered the informal sector voluntarily. Switching between the formal and informal sectors has

**BOX 2.3.1 Informality in Latin America and the Caribbean (continued)**

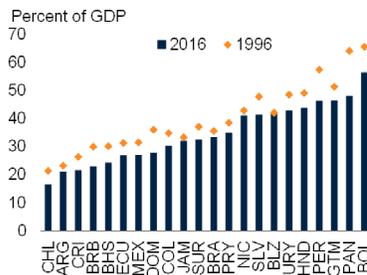
**FIGURE 2.3.1.2 Evolution and correlates of informality in Latin America and the Caribbean**

Although output-based informality in LAC has fallen, the incidence of informality still varies considerably within the region. In LAC economies where corruption and the burden of paying taxes is high, output-based informality tends to be high. Self-employment tends to be high where labor market efficiency is low. Both corporate and personal income tax rates are higher in LAC than in all EMDEs.

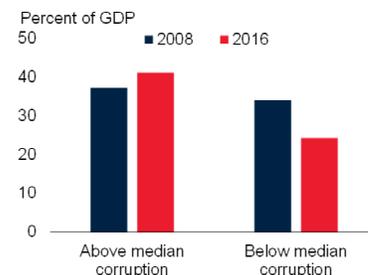
**A. DGE-based informal activity**



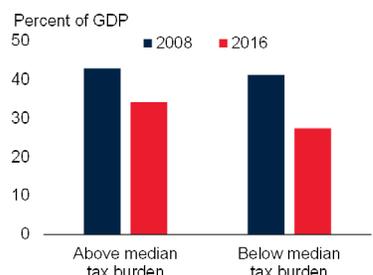
**B. DGE-based informal activity, by country**



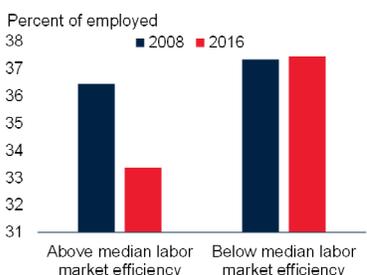
**C. DGE-based informal activity**



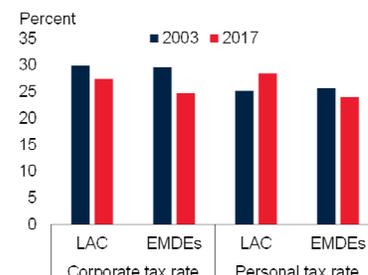
**D. DGE-based informal activity**



**E. Self-employment**



**F. Average tax rates**



Source: Elgin et al. (forthcoming), Haver Analytics, Inter-American Development Bank, national statistical bureaus and offices, Organisation for Economic Co-operation and Development, Végh and Vuletin (2015), World Bank (Doing Business, World Development Indicators, and World Governance Indicators), World Economic Forum (Global Competitiveness Index).

A. Sample includes 23 economies. The median of the MIMIC-based estimate of informality shows a similar downward trend.

B. CHL = Chile, ARG = Argentina, CRI = Costa Rica, BRB = Barbados, BHS = The Bahamas, ECU = Ecuador, MEX = Mexico, DOM = Dominican Republic, COL = Colombia, JAM = Jamaica, SUR = Suriname, BRA = Brazil, PRY = Paraguay, NIC = Nicaragua, SLV = El Salvador, BLZ = Belize, URY = Uruguay, HND = Honduras, PER = Peru, GTM = Guatemala, PAN = Panama, BOL = Bolivia.

C. Bars show medians. Sample includes 21 LAC economies.

D. Bars show medians. Sample includes 20 LAC economies. Tax burden is measured as the ease of paying taxes in the World Bank's Doing Business indicators.

E. Bars show medians. Sample includes 16 LAC economies.

F. Corporate tax rate sample includes 17 LAC economies and 49 EMDEs; personal tax rate sample includes 17 LAC economies and 47 EMDEs.

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been common in the largest economies in the region (Bosch and Maloney 2010; Fiess, Fugazza, and Maloney 2008; Perry et al. 2007). This may reflect a higher regard for self-employment in LAC relative to other regions, or a response to adverse employment and income shocks in the formal sector.

**Lower output growth.** In studies of a large number of LAC economies, informality has been negatively associated with growth, even after controlling for country characteristics (Loayza 1997; Loayza, Servén, and Sugawara 2010). However, studies at the country level are

less conclusive. In Mexico, for instance, informality has been accompanied by slowing growth, yet in Brazil, falling informality may not be associated with higher GDP (Levy 2008; Ulyseia 2018).

**Lower productivity growth.** The informality literature on LAC has established a link between informality and aggregate productivity (Loayza, Servén, and Sugawara 2010). Linkages between informality and productivity have also been identified at the firm level. Informal firms in Brazil, for instance, have been less productive than formal firms (de Paula and Scheinkman 2011). In

### BOX 2.3.1 Informality in Latin America and the Caribbean (*continued*)

Paraguay, not only are informal firms less productive, but their low productivity has had negative spillovers to formal firms (Vargas 2015).

**Lower savings and access to finance for households and firms.** For workers and firms, there are negative financial implications of informality. Informal workers in Chile, for instance, have not been able to save as much as formal workers, and have had less access to finance than formal firms (Schlcarek and Caggia 2015). In Brazil, poor access to finance was the key reason for informal firms being small and unproductive: their cost of capital was at least 1.3 times that of formal firms (de Paula and Scheinkman 2011). Similarly, in Ecuador, lower productivity and profitability in informal firms was due in part to worse access to credit (Medvedev and Oviedo 2013). Across the region, rising informality has been associated with lower pension contributions (Vuletin 2008).

**Higher poverty and inequality.** Informality in LAC has also been associated with inequality and poverty, in part reflecting the wage gap between the informal and formal sectors. In Argentina, past poverty has been associated with current informal employment, and past informality has been associated with current poverty (Devicienti, Groisman, and Poggi 2015). The process of increasing formal-sector employment contributed significantly to the decline in inequality in Argentina and Uruguay during the 2000s (Aramante, Arim, and Yapora 2016; Beccaria, Maurizio, and Vazquez 2015). In Colombia, informal workers received lower wages than formal workers due not only to lower returns to their education, but also to educational mismatches (Herrera-Idárraga, López-Bazo, and Motellón 2015).

#### Policy options

Designing policies to address informality requires an understanding of its causes and characteristics. These vary considerably, even within individual countries in LAC (Fernandez and Villar 2016; Perry et al. 2007).

**Tax system.** Making tax policy less restrictive, by lowering tax rates or simplifying tax systems, could incentivize firms to become formal and increase demand for formal workers.

Indeed, a large reduction in payroll tax rates in Colombia in 2012 reduced labor informality in the main metropolitan areas by about 7 percentage points (Fernandez and Villar 2016). The results of Brazil's reduction and simplification of business taxes in 1996 have been more ambiguous. Early studies found that the reform was associated with a significant increase in the incidence of formal firms, and that newly formalized firms achieved higher revenue and profits than those operating informally, although the impact of the reform on informality varied across economic sectors (Fajnzylber, Maloney, and Montes-Rojas 2011; Monteiro and Assunção 2012). Recent studies have found no evidence of increased formalization as a result of the reform (e.g., Piza 2016).

**Labor market regulation.** Tighter labor inspections have been effective in reducing informality in the region, through a variety of mechanisms. In Brazil, tighter enforcement of labor market regulations raised wages and output by improving the allocation of workers between the formal and informal sectors (Meghir, Narita, and Robin 2015). More frequent labor inspections in Brazil also induced some informal workers to become formal, albeit due to wage rigidity in the formal sector (Almeida and Carneiro 2012). Inspections were also more effective than incentives in convincing firms in Brazil to operate in the formal sector (de Andrade, Bruhn, and McKenzie 2013).

**Other regulations.** Policy reforms intended to ease barriers to entering the formal sector have had diverse outcomes. A reform that simplified the process of opening a business in Mexico was successful in increasing the number of registered businesses (Bruhn 2011; Kaplan, Piedra, and Seira 2011). However, the reform had no impact on informality: the owners of the new businesses were former employees of formal firms, rather than informal workers. Financial deepening contributed to a reduction in informality in Uruguay, particularly for women and older workers (Gandelman and Rasteletti 2016). Finally, the emerging "gig" economy presents unique policy challenges that may require regulatory changes to smooth economic risks for "gig" workers (World Bank 2014b, 2016c, and 2018n).