

CHAPTER 5

Informality in Emerging Market and Developing Economies: Regional Dimensions

Emerging market and developing economies (EMDEs) experienced a decline in informality over the two decades prior to the COVID-19 pandemic. Output informality declined most in East Asia and Pacific (EAP) and South Asia (SAR), while employment informality fell most in the Middle East and North Africa (MNA), SAR, and Sub-Saharan Africa (SSA). Yet the incidence of informality remains high in all regions. In SAR and SSA, pervasive informality has been associated with low human capital and large agricultural sectors. In Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), and MNA, heavy regulatory and tax burdens and weak institutions have been important factors. Also important have been legacies of the transition from central planning to market economies in ECA and disruptions related to conflict in MNA and SSA. In EAP, employment informality is associated with lagging social protection in cities following large-scale rural-to-urban migration. A balanced policy mix tailored to economy-specific circumstances can help mitigate the adverse effects of informality.

Introduction

Informal economic activity is pervasive in emerging market and developing economies (EMDEs), accounting for one-third of GDP, on average. Self-employment, a commonly used proxy for informal employment, averages about two-fifths of total employment. For various reasons, including flexibility, some firms and workers choose to remain informal. In some cases, informal work may be the only option. High levels of informality are associated with low labor productivity and low tax revenues, and can further entrench poverty and inequality.

Informality fell in the average EMDE in the two decades before the COVID-19 pandemic, although the pace of decline varied across regions and countries. The correlates of informality also vary across regions, shaped by distinctive regional cultures and histories, as well as economic, social and policy structures.

This chapter addresses the following questions:

- How has informality evolved over the past two decades in each EMDE region?
- What are the correlates of informality in each region?

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- What policy options are available to address the challenges associated with informality in each region?

Several techniques have been developed to measure informality (chapter 2).¹ For the analysis here, output informality is proxied by dynamic general equilibrium (DGE) model-based estimates, in percent of official GDP, and employment informality refers to the share of self-employment in total employment, unless otherwise indicated. These measures are chosen because of their extensive economy and time-series coverage.

Contributions. The chapter makes several contributions to the literature. First, the chapter brings a regional perspective to the existing literature on informality in EMDEs. Past studies either grouped all economies together or focused on one or a few economies or a specific region. The chapter distills commonalities among EMDEs within each region and differences across regions. Second, the chapter brings together multiple strands of literature by investigating two key types of informality—output and employment informality—thus helping policy makers better understand the nature of informality in their respective regions (chapter 4). Previous studies typically examined either output informality or employment informality. Lastly, the chapter provides policy recommendations that are tailored to region-specific needs and conditions. Former studies tend to have a broad overview of all relevant policies without applying them to the regional context.

Main findings. First, the chapter documents large differences in the evolution of informality across regions. Output informality is highest in ECA, LAC, and SSA, while employment informality is highest in EAP, SAR, and SSA. Output informality declined most in EAP and SAR between 1990-99 and 2010-18, while employment informality fell most in MNA, SAR, and SSA. Despite declines in output informality, and consistent with slower productivity growth in the informal than the formal sector, employment informality remained broadly unchanged in EAP, ECA, and LAC between 1990-99 and 2010-18.

Second, a mix of cross-regional, intra-regional, and economy-specific factors are associated with informality in EMDEs. Key correlates of high informality include low human capital, large agricultural sectors, and poor business climates. But there are also important region-specific factors, such as insufficient social protection coverage, trade liberalization, and economic disruptions due to armed conflict. Reflecting regional as well as national differences in informality, balanced policy mixes tailored to economy circumstances are required to set the right conditions for informality to fall.

¹Three methods of estimating informal output are used in this book. The DGE method refers to the dynamic general equilibrium (DGE) model of Elgin and Oztunali (2014). It estimates the allocation of labor between the formal and informal sectors based on the assumption of utility maximization by an infinitely lived representative household endowed with certain units of productive capital and time. An alternative, multiple indicators multiple causes (MIMIC) method is based on a model comprising structural equations that use observable causes and indicators to capture the latent level of informal output. A third method of uses survey data on perceptions of informal activity obtained by the World Economic Forum, World Values Survey, and World Bank Enterprise Surveys. Chapter 2 contains a detailed discussion of these and other measures of informality and their limitations.

The remainder of the chapter is structured as follows. The next section provides an overview of informality in EMDEs. The subsequent sections discuss the evolution of informality in each of the six EMDE regions. Each of these sections examines the correlates of informality and presents region-specific policy options to address the challenges associated with informality. The last section concludes with a discussion of emerging opportunities and policy challenges.

Informality in EMDEs

Informality is far more widespread in EMDEs than in advanced economies (figure 5.1). Informal output in EMDEs was, on average, 33 percent of official GDP between 2010 and 2018, while self-employment accounted for 42 percent of total employment. These shares were 18 and 14 percent, respectively, in advanced economies. Of the six EMDE regions, output informality is highest in ECA, LAC, and SSA. Employment informality is highest in EAP, SAR, and SSA.

Informality has declined in both advanced economies and EMDEs over the past two decades, but by more in EMDEs (figure 5.1; chapter 2). In EMDEs, output informality decreased by 8 percentage points between 1990 and 2018, while employment informality fell by about 9 percentage points, with increases in the mid-1990s and early 2000s subsequently reversed.

EMDEs account for half of the world's informal output and more than 90 percent of its informal employment (figure 5.2). Three EMDE regions—EAP, LAC, and ECA—account for more than one-third of the world's informal output. These are also the largest EMDE regions in terms of official GDP. EAP and SAR account for the largest shares, by far, of informal employment at the global level. These two regions' shares of global informal employment are three times and eight times as large, respectively, as their shares of global informal output, implying that productivity is particularly low among informal workers in EAP and SAR.

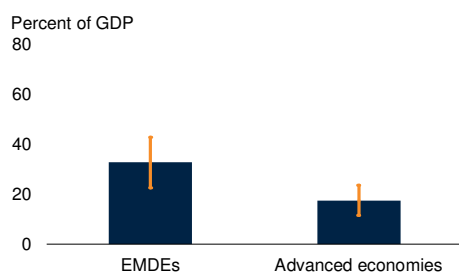
EAP and SAR also experienced the largest declines in output informality between 1990-99 and 2010-18, in large part reflecting rapid economic development in China and India. The sharpest decline in employment informality occurred in SAR, followed by MNA and SSA. Despite declines in output informality, employment informality increased slightly in EAP and LAC. This may reflect, in part, rigid labor markets and burdensome regulations (LAC) and mismatch between rapidly expanding jobs during urbanization and lagging social protection coverage as demographic conditions changed (EAP). Informality—especially employment informality—is most prevalent in EMDEs with low income per capita, reflecting the role of informality as both a driver and a consequence of poverty (figure 5.2; La Porta and Shleifer 2014).

Informality in EMDEs is associated with numerous factors, well documented in the literature. EMDEs with the highest incidence of informality tend to have weak human capital (less educated and less skilled workers), large agricultural sectors, and poor

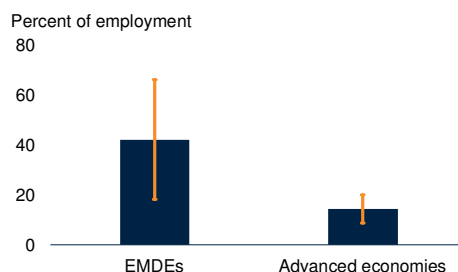
FIGURE 5.1 Evolution of informality in advanced economies and EMDEs

Informality is far more widespread in emerging market and developing economies (EMDEs) than in advanced economies. Output and employment informality have declined in both groups, but by more in EMDEs.

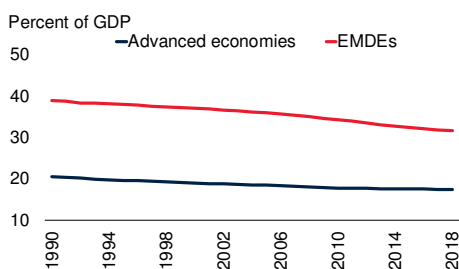
A. Output informality



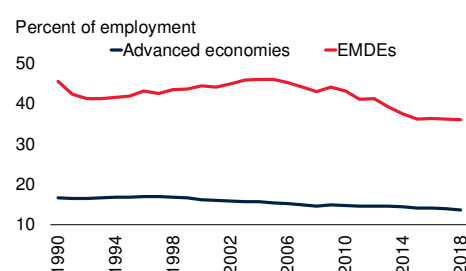
B. Employment informality



C. Output informality, 1990-2018



D. Employment informality, 1990-2018



Sources: International Labour Organization; World Bank.

Note: Informal output is proxied by dynamic general equilibrium (DGE) model-based estimates, in percent of official GDP. Informal employment is the share of self-employment in total employment. EMDEs = emerging market and developing economies.

A.B. Bars show unweighted group averages for 2010-18 and vertical lines show +/-1 standard deviation.

C.D. Lines show unweighted group averages for each year.

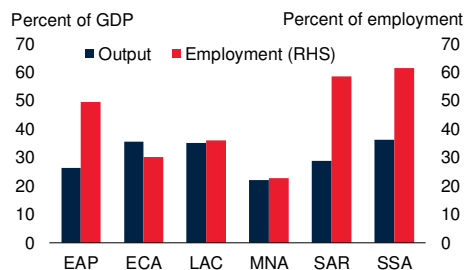
institutional environments (for instance, high corruption or restrictive regulations; figure 5.3; chapter 4). In SAR, and SSA, for instance, agricultural production still makes up a large share of employment in many economies.

Other key correlates of informality differ among regions. In EAP, large-scale rural-to-urban migration in recent decades supported rapid growth and industrialization. Although this migration has been accompanied by falling output informality, employment informality increased, because of lagging social protection. In ECA, the high shares of informal output in some economies are partly a legacy of the transition from centrally planned to market economies. In LAC, trade liberalization reforms of the 1990s contributed to growing informality in some economies, as formal firms that were unable to compete in a liberalized formal economy retreated into informality. In MNA and SSA, economic disruptions during armed conflicts have forced people to earn their livelihoods in the informal economy.

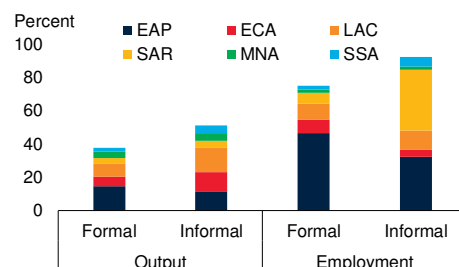
FIGURE 5.2 Informality in EMDE regions

Employment informality tends to be higher than output informality in EMDE regions. Low per capita income is associated with high informality, especially employment informality.

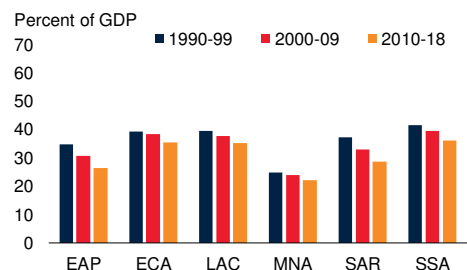
A. Output and employment informality



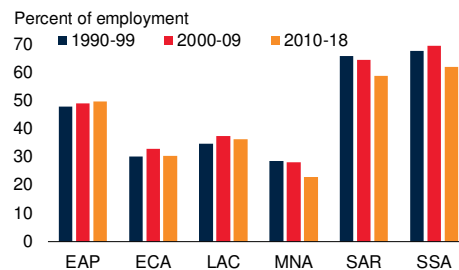
B. EMDE regions' shares of world output and employment



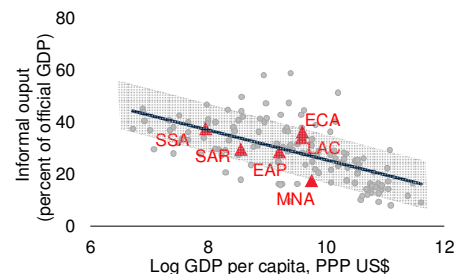
C. Output informality



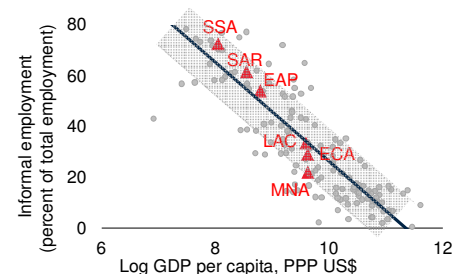
D. Employment informality



E. GDP per capita and output informality



F. GDP per capita and employment informality



Sources: International Labour Organization; World Bank.

Note: Informal output is proxied by dynamic general equilibrium (DGE) model-based estimates, in percent of official GDP. Informal employment is the share of self-employment in total employment. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. A.C.D. Bars show unweighted group averages for 2010-18.

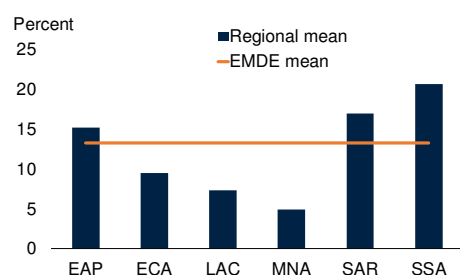
B. Estimates are based on economies' shares of output and employment averaged over 2010-18.

E.F. Grey markers show unweighted average log GDP (2017 PPP \$) relative to informal output and employment in individual EMDEs, with the fitted line shown in blue and the corresponding +/-1 standard errors shown in shaded grey areas. Red markers show median GDP per capita and median informal output and employment in EMDE regions. Data are for 2010-18. Sample includes 154 economies for output informality and 147 economies for employment informality.

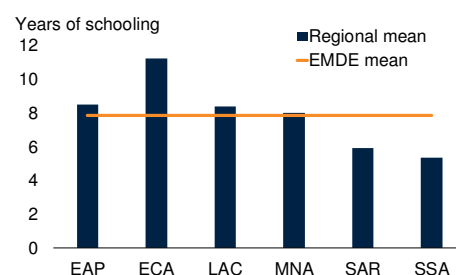
FIGURE 5.3 Correlates of informality in EMDE regions

EMDE regions with higher employment informality tend to have larger agricultural sectors, lower educational attainment, heavier tax burdens, and poorer governance than regions with smaller informal sectors.

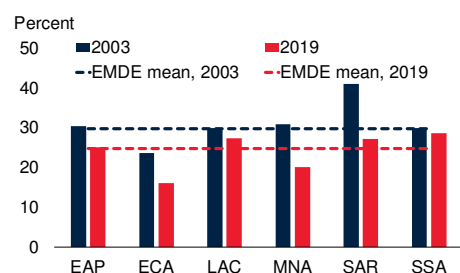
A. Share of agricultural output in output



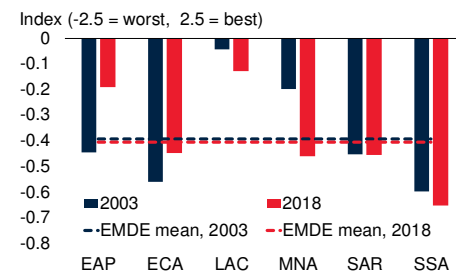
B. Years of schooling



C. Corporate tax rates



D. Control of corruption



Sources: Barro and Lee (2013); Végh and Vuletin (2015), World Bank (World Development Indicators, World Governance Indicators).

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDE = emerging market and developing economies; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Data for 2010-18.

B. Average years of schooling for those aged 15 and older. Data for 2010.

C.D. Bars show unweighted group averages.

D. The dashed lines are unweighted averages for EMDEs in 2003 and 2018, respectively.

The COVID-19 pandemic has hit the informal sector hard. An estimated three-quarters of the world's informal workers were significantly impacted by lockdowns in early 2020 (ILO 2020). In many economies, informal firms are concentrated in the services sector, which has been subject to more disruption from government-imposed mobility restrictions than the industrial or agricultural sectors due to reliance on face-to-face interactions. However, because informal workers are often not registered in government systems, many have been out of reach of social assistance programs. If unreachable through benefits programs, informal workers are likely to feel compelled to continue working, despite the health risks (Maloney and Taskin 2020). Encouragingly, the policy response to COVID-19 in some EMDEs has included the provision of benefits to informal workers, including through digital platforms, although the adequacy and coverage of benefits to informal workers was far from complete (Dabla-Norris and Rhee 2020; Díez et al. 2020; Frost, Gambacorta, and Shin 2021).

East Asia and Pacific

The EAP region experienced a sharp decline in output informality over the past two decades. This decline was broad-based within the region. However, there remain pockets of high informality, in particular in several lower-middle-income economies characterized by large rural sectors, poor governance, weak institutions, and low human capital (Cambodia, Lao People's Democratic Republic, and Myanmar).

Although many economies in the region have made considerable progress in integrating rural migrants into urban labor markets, they still face challenges related to urban informality. EAP has large slum populations. Many urban dwellers are informal workers with inadequate social protection and without access to basic services like clean water and public transportation. While cities across East Asia have propelled the region's rapid economic growth, there remain challenges in expanding opportunities, including to unregistered migrants living in urban peripheries. Reforms to urban planning can help expand access to opportunities.

The COVID-19 pandemic is taking a severe toll on micro, small, and medium-sized enterprises (SMEs), which are the sources of livelihood for most informal workers. The pandemic and resulting lockdowns, given the limited access in the informal sector to social support and digital technologies, are likely to have increased inequality. Policies that focus on skills upgrading and improving access to resources, such as business development services, can help reverse this.

Evolution of informality in EAP

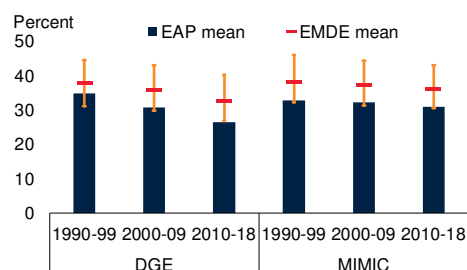
Informal output in EAP was equivalent to 27 percent of official GDP, on average, in 2010-18, below the EMDE average and down from 35 percent of GDP in 1990-99 (figure 5.4). Survey-based measures of informality in EAP, such as perceptions of informal activity, also indicate a decline. However, informal employment (as measured by self-employment), at 50 percent of total employment, was higher than the EMDE average in 2010-18 and has increased slightly over the past two decades. In an alternative measure of employment informality, the share of labor without basic pension coverage, approximately 70 percent of EAP employment can be categorized as informal in recent years.

Declining output informality in EAP has been accompanied by sustained economic growth, rapid industrialization and urbanization, and improvements in institutional quality (Loayza 2016; World Bank 2015). Between 1990-99 and 2010-18, the share of informal output declined rapidly in the fastest-growing economies, in part reflecting the effects of comprehensive reforms. For example, the share of informal output in GDP in Myanmar fell by 33 percentage points, to below 30 percent in 2010-18, following broad-based liberalization measures (figure 5.4).

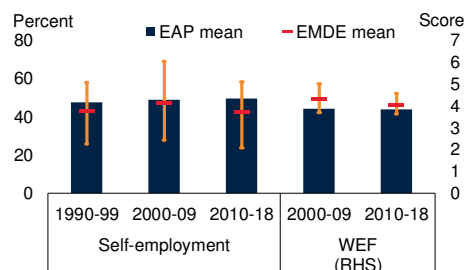
FIGURE 5.4 Informality in East Asia and Pacific (EAP)

Compared with other EMDE regions, EAP's share of informal output is moderate, whereas its share of informal employment is above average. Informality is particularly high in lower-income economies, which are also characterized by more stringent labor regulations and lack of enforcement.

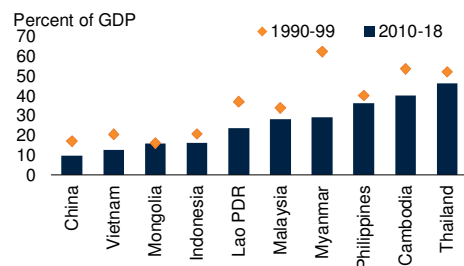
A. Output informality



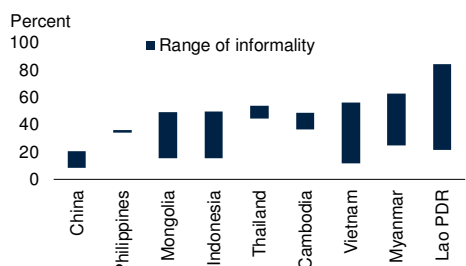
B. Employment informality and perceptions of informality



C. Output informality in selected economies



D. Range between employment and output informality



Sources: International Labour Organization; World Bank; World Economic Forum (2018).

Note: EAP = East Asia and Pacific; EMDE = emerging market and developing economies.

A,B. Blue bars show unweighted averages of the informal economy of the region. Red markers show unweighted averages of all EMDEs and the vertical lines denote the interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model; MIMIC = multiple indicator multiple causes model. Both models estimate the size of the informal sector as a percent of official GDP. DGE sample includes 12 EAP economies and 122 EMDEs; MIMIC sample includes 14 EAP economies and 124 EMDEs.

B. Self-employment is measured as percent of total employment. The World Economic Forum (WEF) asks the following 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)." The average responses are used to capture the extent of perceived informality. The index is reversed here so that a lower WEF index indicates a larger informal economy. Self-employment sample includes 19 EAP economies and 134 EMDEs; WEF sample includes 19 EAP economies and 134 EMDEs.

C. Output informality is based on DGE estimates, in percent of official GDP.

D. The upper bound of each bar indicates the latest available share of self-employment in total employment. The lower bound indicates the latest available share of informal output in official GDP, based on DGE estimates. For Malaysia, not shown, the level of informal output is slightly higher than the level of informal employment. Data for last available year.

Employment informality in upper-middle-income economies is about two-fifths lower than in lower-middle-income economies. In a pattern consistent with per capita incomes, output informality is also lower, by about one-tenth.²

²Although the commonly observed link between per capita income and informality generally holds in the EAP region, there are outliers. Thus, informality is relatively high in Thailand despite its higher-middle-income status.

In lower-middle-income economies, the share of informal employment far exceeds the share of informal output, reflecting low labor productivity in the informal sector. The differentials are particularly pronounced in Indonesia, Lao PDR, Mongolia, and Vietnam (figure 5.4).

Correlates of informality in EAP

The extent of informality in EAP is associated with several economic and institutional factors, particularly the size of the agricultural sector and human capital development, as well as firm structure, regulatory burdens and the quality of governance. Informality is also correlated with such socio-economic variables as poverty and inequality, which may exacerbate the vulnerability to shocks of households in the informal sector (chapter 4).

Urbanization. EAP is the world's most rapidly urbanizing region: the urban population grew by an average of 3 percent annually during 1978-2015 (Judy and Gadgil 2017). Rapid industrialization in EAP has supported large-scale rural-to-urban migration and stimulated growth of output, labor productivity, and employment (Ghani and Kanbur 2013). Urbanization has coincided with a shift from agriculture to manufacturing and services in China and other fast-growing East Asian economies (McMillan, Rodrik, and Sepúlveda 2017; Rodrik 2015). In general, larger non-agricultural sectors are associated with lower informal output, and informality in manufacturing is significantly lower than in services (figure 5.5; Atesagaoglu, Bayram, and Elgin 2017). In economies such as Myanmar, Indonesia, and Lao PDR, informal employment accounts for about 80 percent of total non-agricultural employment (World Bank 2020a).

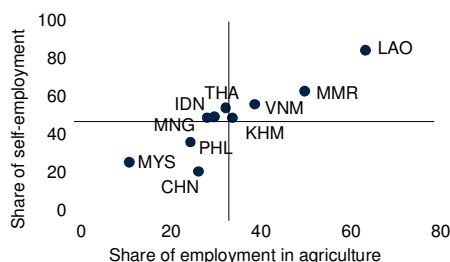
However, rapid growth of cities in EAP has been accompanied by rising urban informality and policy challenges, such as lack of affordable housing, growing slums, poor provision of basic services, and widening income inequality among urban dwellers. In China, for example, there is unequal access to public services between citizens with urban household registration under the *hukou* system and those without, with many unregistered urban households still lacking essential social protection (Park, Wu, and Du 2012; World Bank 2014). Despite having the lowest employment and output informality in EAP, China is estimated to have approximately 120-150 million rural-to-urban migrants who are not registered to work in cities (Gagnon, Xenogiani, and Xing 2011; Huang 2009; Jutting and Xenogiani 2007). Much of the urban slum population is informally employed, with significantly lower wages than in the formal sector (Judy and Gadgil 2017). The cities with the largest numbers of urban poor are in China, Indonesia, and the Philippines, while the highest urban poverty rates are in the Pacific Island countries of Papua New Guinea, Timor-Leste, Vanuatu, as well as in Indonesia and Lao PDR.

Firm structure. Economic reforms in China and Vietnam that began in the 1970s have allowed the emergence of private sector activity in the form of unregulated micro-enterprises, family enterprises, and individual entrepreneurs (Park, Wu, and Du 2012). The informal economy in these and other economies mostly comprises such enterprises. For example, in Indonesia, most informal firms have fewer than five employees. These

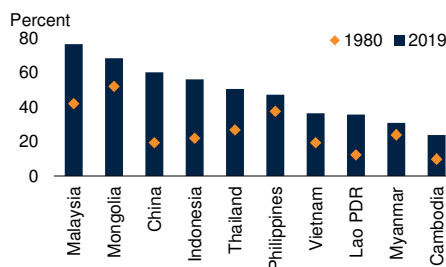
FIGURE 5.5 Correlates of informality in East Asia and Pacific (EAP)

Better institutions and business environments, industrialization, and urbanization are associated with relatively low informality in higher-income economies. Economies with higher shares of informality have lower levels of educational attainment.

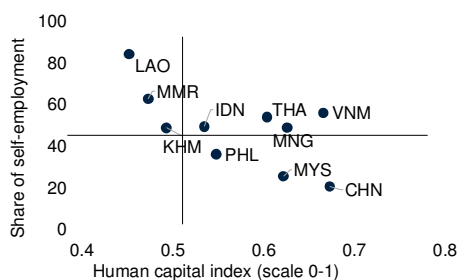
A. Employment informality and agricultural employment



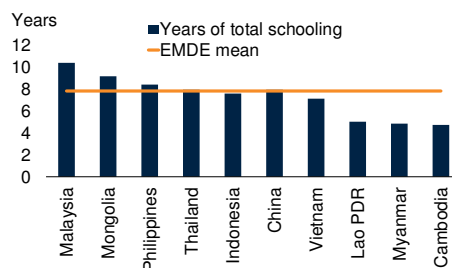
B. Share of urban population in total population



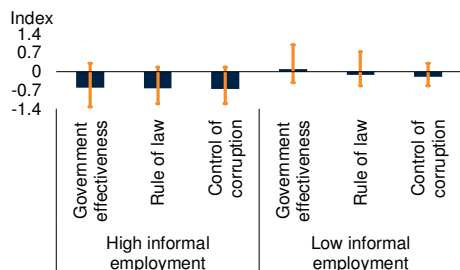
C. Employment informality and human capital



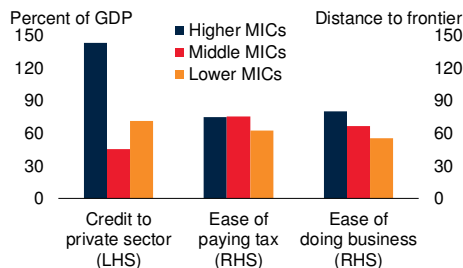
D. Years of schooling



E. Institutional factors in economies with high and low informal employment



F. Institutions and income per capita



Sources: Barro and Lee (2013); International Labour Organization; World Bank (*Doing Business*, World Development Indicators, Worldwide Governance Indicators).

Note: CHN = China; EAP = East Asia and Pacific; EMDE = emerging market and developing economies; IDN = Indonesia; KHM = Cambodia; LAO = Lao PDR; MICs = middle-income countries; MMR = Myanmar; MNG = Mongolia; MYS = Malaysia; PHL = the Philippines; THA = Thailand; VNM = Vietnam.

A. Agricultural employment and self-employment are share of employment in agriculture and share of self-employed in total employment, respectively. Data for 2018.

C. The Human Capital Index (HCI) calculates the contributions of health and education to worker productivity. The final index ranges from zero to one and measures the productivity as a future worker of a child born today relative to the benchmark of full health and complete education. The vertical and horizontal lines denote EMDE averages. Data for the latest year available.

D. Total years of schooling is the average years of education completed by people over age 15. Data for the latest year available.

E. A higher value indicates better institutional quality. Error bars reflect values from all EMDEs in EAP. "High informal employment" includes EAP EMDEs with above-median informality over the period 2010-18; "low informal employment" includes those with below-median informality over the same period. Data for the latest year available.

F. "Higher MICs" include China, Malaysia, and Thailand. "Middle MICs" include Indonesia, Mongolia, and the Philippines. "Lower MICs" include Cambodia, Lao PDR, Myanmar, and Vietnam. These groupings are based on GDP per capita.

firms also tend to be less productive than larger firms, and they pay lower wages. Their operations predominantly supply local markets and they have little ambition for expansion (Rothenberg et al. 2016).

Policy options to address informality challenges in EAP

A distinctive feature of EAP is its large number of slum dwellers. Informality tends to be high among these populations. Targeted policies to improve urban planning can improve living conditions and provide more equal opportunities to informal workers in these settlements. In lower-middle-income economies, underinvestment in human capital and persistently low labor productivity warrant attention. In addition, complementary broad-based measures, such as improving governance and removing disincentives to formal employment, could be pursued.

The COVID-19 pandemic has exposed the challenges in protecting informal workers and vulnerable households in Asia. But it has also provided an opportunity to address longstanding inequalities—in access to health and basic services, finance, and the digital economy—and to enhance social protection for informal workers (Dabla-Norris and Rhee 2020).

Urban planning reforms. Agglomeration benefits can lower the unit costs of public service provision in cities, enabling governments to extend access to basic services to more people (Ghani and Kanbur 2013). To leverage these benefits, urban plans must be well-designed to help improve access to jobs, affordable housing, commercial services, public transportation, and health and education services, thus providing more equal opportunities to disadvantaged communities (Judy and Gadgil 2017; World Bank 2015). Examples of effective metropolitan governance include Beijing, Jakarta, Kuala Lumpur, Metro Manila, and Shanghai (World Bank 2015; World Bank and DRCS 2014).

Increasing labor productivity. A shift into the formal sector does not necessarily increase labor productivity in firms (Demenet, Razafindrakoto, and Roubaud 2016). Supporting policies need to be in place, including to improve access to business development services, decrease red tape and corruption, facilitate access to financial services, and offer better education and training (OECD 2009; World Bank 2019a). These policies are especially important for small agricultural enterprises, which engage a large share of EAP's workforce.

Reducing regulatory burdens. Removing disincentives to formal employment could encourage a shift of informal firms into the formal sector. Policies can include less burdensome registration procedures and costs and simpler tax assessment and payment regimes. Such broad-based reforms to improve the business climate are also important for formal firms, incentivizing them to invest, grow and create more jobs. These measures could be complemented with strengthening enforcement to increase the benefits of regulatory compliance.

Widening social protection coverage. Investment in social-support systems can be scaled up, systems can be more effectively targeted and, where possible, linked with existing education, health and employment support mechanisms. The tax base can be widened, the progressivity in taxation increased, and financing of social insurance schemes can be expanded (OECD 2019). The pandemic provides an important opportunity for policy makers to take measures to strengthen social protection systems, including ability to adapt to future shocks (World Bank 2020a).

Europe and Central Asia

The incidence of informality in ECA differs markedly between the eastern and western portions of the region. The east, with weaker institutions and less conducive business climates, has significantly higher informality than the western part (figure 5.6). Higher informality in the east can also be attributed partly to larger agricultural sectors and to sizable remittance inflows which have provided capital to establish small, informal businesses.

Some ECA economies have had success with policies to promote lower informality, including reductions in tax compliance burdens and tax rates. Policies to promote more flexible labor markets have also been associated with reductions in informal employment. For economies in the east, building stronger institutions, strengthening enforcement, and controlling corruption can encourage businesses to operate in the formal economy.

Evolution of informality in ECA

With the collapse of central planning in ECA in the late 1980s, the informal sector expanded dramatically. Many firms chose to operate informally to avoid regulations, taxation, or corruption, but also because informal activities were profitable due to rationing of consumer goods and high inflation (Johnson, Kaufmann, and Shleifer 1997). During 1989-95, the size of the informal economy more than doubled. Since then, informality in ECA has fallen slightly, from an average of 39 percent of official GDP in 1990-99 to 36 percent in 2010-18; it is still slightly higher than the EMDE average (figure 5.6). Survey-based measures of informality in ECA, such as perceptions of informal activity, also indicate a downward trend. Employment informality (measured by self-employment), however, was unchanged between 1990-99 and 2010-18, at 30 percent of total employment.

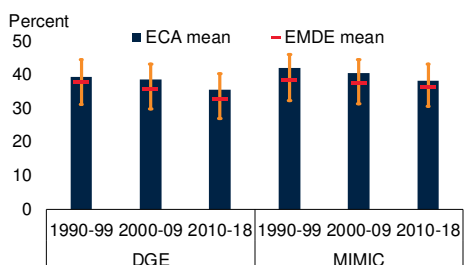
Since the 1990s, the western portion of ECA has experienced a faster decline in informality than the east, reflecting more progress with market liberalization and other reforms and less corruption than in the east (Kaufmann and Kaliberda 1996). Notwithstanding the larger decline in informality in the west of the region, one in ten formal employees in Central Europe still received “envelope wages” as recently as 2006.³

³ “Envelope wages” refers to the practice of paying a portion of wages in undeclared cash to avoid tax and social security contributions (Williams and Padmore 2013).

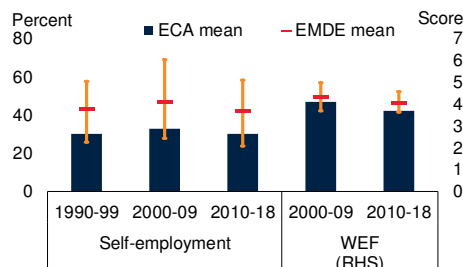
FIGURE 5.6 Informality in Europe and Central Asia (ECA)

Output informality in ECA has been higher than the EMDE median since the 1990s, and has declined at roughly the same pace as in other regions. But employment informality in ECA has been lower than the EMDE average. Within ECA, informality has been higher and has declined more gradually in the east.

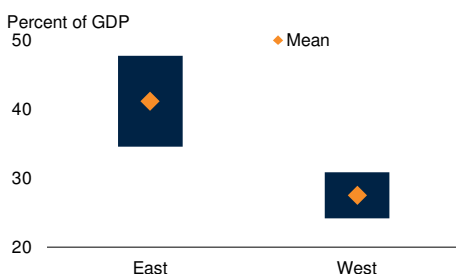
A. Output informality



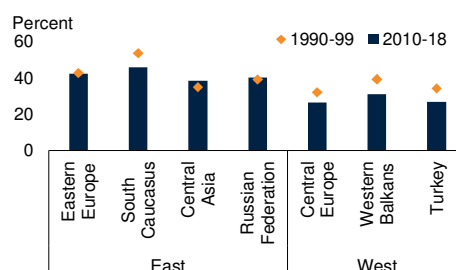
B. Employment informality and perception of informality



C. Output informality in the eastern and western parts of the region



D. Output informality



Sources: International Labour Organization; World Bank; World Economic Forum (2018).

Note: ECA = Europe and Central Asia; EMDE = emerging market and developing economies.

A.B. Blue bars show unweighted averages of the informal economy of the region. Red markers show unweighted averages of all EMDEs and the vertical lines denote the interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model; MIMIC = multiple indicator multiple causes model. Both models estimate the size of the informal sector as a percent of official GDP.

B. Self-employment is measured as percent of total employment. The World Economic Forum (WEF) asks the following 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)." The average responses are used to capture the extent of perceived informality. The index is reversed here so that a lower WEF index indicates a larger informal economy.

C.D. Output informality is based on DGE estimates, in percent of official GDP. "East" includes Eastern Europe (Belarus, Moldova, and Ukraine), South Caucasus (Armenia, Azerbaijan, and Georgia), Central Asia (Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan) and Russian Federation. "West" includes Central Europe (Bulgaria, Croatia, Hungary, Poland, and Romania), the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, and Serbia), and Turkey.

C. Data are for the latest year available, in most cases, for 2018. Orange diamonds indicate subsample averages and blue bars indicate the one-standard deviation range. Output informality is based on DGE estimates, in percent of official GDP.

Correlates of informality in ECA

Informality in ECA has been associated with several economic and institutional factors, including the size of the agriculture sector, remittances, and institutional quality. Informality has also had socio-economic consequences, such as greater income inequality

arising from lower wages in the informal sector and lower fiscal revenues and capacity, as informal firms do not pay taxes.

Remittances. Several economies in ECA (in particular, the Kyrgyz Republic and Tajikistan) are among the most remittance-reliant in the world in terms of inflows as a share of GDP (World Bank 2020b). At the household level, high levels of remittances inflows are associated with a higher likelihood of working informally in ECA (Ivlevs 2016). Remittances can provide capital to help establish small businesses, which tend to be informal, and income support that can make it easier to engage in less secure but often more lucrative informal work (Chatterjee and Turnovsky 2018; Shapiro and Mandelman 2016).

Institutions. Institutional quality is better in ECA, on average, than in the average EMDE, but it varies widely, with much weaker indicators in the eastern part of the region (figure 5.7). The west has seen marked improvements in its institutional environment, including more effective government, better regulatory quality, strengthened enforcement, and less corruption, in part owing to reforms implemented in the context of the European Union (EU) accession process (Kaufmann and Kaliberda 1996). These gains have contributed to substantial improvements in the business environment, encouraging firms to operate in the formal sector.⁴

Wage gaps. Traditionally, workers are thought to seek informal work when formal employment opportunities are scarce and when they are less productive (box 4.1). But the informal sector can also provide opportunities to develop human capital helpful for eventual formal employment or self-employment, as has been found for the Russian Federation and Turkey (Guariglia and Kim 2006; Taymaz 2009). In some ECA economies (Russia, Romania, Tajikistan, and Ukraine), informal workers have been found to earn a wage *premium* over formal workers, which may compensate for the lack of social security and lower job security.⁵ Relatively high wages in the informal sector may encourage skilled professionals to forgo emigration opportunities in highly regulated economies experiencing high rates of emigration, such as Tajikistan (Abdulloev, Gang, and Landon-Lane 2011).

Fiscal revenues. Within ECA, large informal sectors are associated with lower tax revenues and lower provision of public goods (figure 5.7). However, the magnitude of revenues lost because of informality is a matter of debate. One estimate is that tax revenue losses from informality could have been as high as 7 percent of GDP in Armenia in 2004 (Grigorian and Davoodi 2007). Survey data, however, point to only modest potential revenue gains (0.03-0.07 percent of GDP) from turning informal workers into formal workers in Ukraine in 2009, as the newly formal sector workers would typically be low-skilled and subject to low tax rates (World Bank 2011).

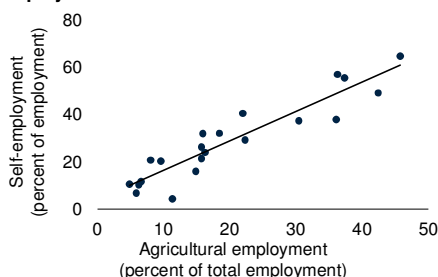
⁴ However, the transition from economies dominated by large-state owned enterprises to more private-business friendly economies can sometimes create more informal employment and a larger informal sector (Earle and Sakova 2000).

⁵ See, for instance, Lehmann and Norberto 2018, Shehu and Nilsson 2014, Staneva and Arabsheibani 2014, and Zahariev 2003.

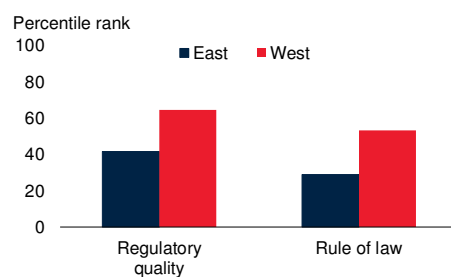
FIGURE 5.7 Correlates of informality in Europe and Central Asia (ECA)

As in other regions, employment informality in ECA tends to be higher in countries with larger agricultural sectors. Output informality is higher in the eastern part than in the western part of the region, in part reflecting differences in institutional quality.

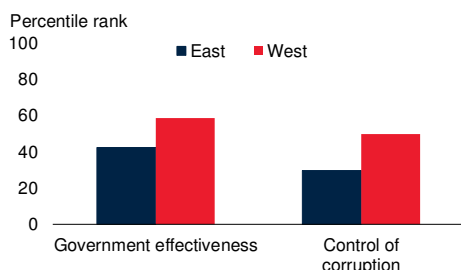
A. Employment informality and agricultural employment



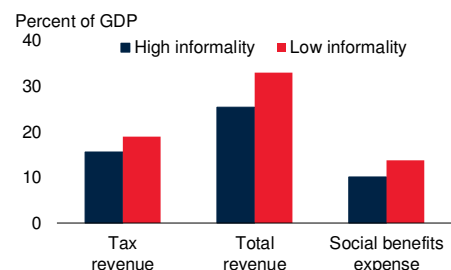
B. Regulatory quality and rule of law



C. Government effectiveness and control of corruption



D. Public finance



Sources: European Bank for Reconstruction and Development; International Labour Organization; International Monetary Fund (Government Finance Statistics); World Bank (Worldwide Governance Indicators).

Note: ECA = Europe and Central Asia; EMDE = emerging market and developing economies.

A. Agricultural employment and self-employment are share of employment in agriculture and share of self-employed in total employment, respectively. Data for 2018. Sample includes 21 ECA countries.

B.C. Data for 2016 in most cases. "East" includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Ukraine, and Uzbekistan. "West" includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Montenegro, North Macedonia, Poland, Romania, Serbia, and Turkey.

D. Values are latest available five-year averages for tax revenue, total revenue and social benefit expenditure from the general government including social security system. High/low informality are median of top/bottom 50 percent of output informality in ECA sample of economies, as measured by average dynamic general equilibrium (DGE) estimates during 2010-18.

Policy options to address informality challenges in ECA

Policies that are effective in other EMDE regions or even in a particular economy within ECA could be counter-productive for another economy in the region. This underscores the importance of tailoring reforms to economy-specific circumstances. In ECA, policies to tackle informality have centered around fiscal policies, reforms of institutional environments, and labor market policies.

Fiscal reforms. Within ECA, large informal sectors are associated with lower tax revenues and lower provision of public goods, which is a general pattern in EMDEs (figure 5.7; chapter 4). However, the magnitude of revenues lost because of informality

depends on economy circumstances. Typically, reducing the tax compliance burden and tax rates, as well as subsidizing the transition to formality, has been accompanied by declines in informality.⁶

- *Preferential tax schemes.* One form of tax simplification that has been used in ECA is the introduction of presumptive taxation for the self-employed and small firms (IFC 2007). This can encourage entrepreneurship, increase revenue collection from hard-to-tax sectors, and ease the transition from informal to formal work. However, these schemes may also inadvertently encourage formal workers to avoid taxes by shifting into presumptive tax status, and encourage firms to remain small (Packard, Koettl, and Montenegro 2012).
- *Other taxes.* Shifting from labor income taxes, which constitute a wedge between informal and formal employment, to less distorting and more easily enforced taxes, such as value-added taxes and progressive real estate or land taxes, can shrink the informal economy (Packard, Koettl, and Montenegro 2012). Such shifts occurred in several ECA economies, such as Azerbaijan and Georgia, after 2000 (Végh and Vuletin 2015).
- *Subsidies.* A formal employment subsidy introduced in Turkey in 2004 and 2005 led to an increase in the number of registered jobs by encouraging informal workers to transition to formal employment, including through better social protection (Betcherman, Daysal, and Pagés 2010).

Building institutions. Better governance and more effective tax collection authorities can reduce the size of the informal economy and increase tax revenue. Corruption has been associated with greater informal activity in Poland and Romania (Johnson et al. 2000). Conversely, better control of corruption has reduced the extent of informal activities, particularly in countries that joined the EU in the mid-2000s (Fialová and Schneider 2011). The eastern part of the region, which has much weaker institutions, could focus on improving governance, strengthening enforcement, and fighting corruption, to mimic the favorable outcomes observed in the west.

Labor market regulations. More restrictive employment protection legislation has been associated with higher informal output and employment in ECA, supporting the case for increasing labor market flexibility (Fialová and Schneider 2011; Lehmann and Muravyev 2009). This can take the form of less restrictive regulations with respect to hiring and dismissal, working arrangements, and wage levels.

COVID-19. With informal and formal workers both having lost wages during the COVID-19 pandemic, new wage support programs have targeted both types of workers.

⁶On one hand, higher labor tax rates encourage a movement into untaxed informal employment, especially for low-wage earners (Koettl and Weber 2012). On the other hand, higher labor tax rates have in some cases been associated with a lower share of informal employment, because higher revenue allow governments to provide better public goods that can only be accessed in formal employment (Fialová and Schneider 2011; Friedman et al. 2000).

Success in reaching the informal sector has been uneven across economies, however. Support programs in ECA, including cash transfers, have also covered informal workers and firms, albeit to a smaller degree than formal workers (World Bank 2020c). Meanwhile, in Central Asia, large informal sectors and low digitalization in Central Asia may have slowed the transition to online sales that has helped other countries weather the pandemic (EBRD 2020).

Latin America and the Caribbean

A confluence of factors—labor market inefficiencies, burdensome regulations and taxation, corruption, and vast economic and social inequalities—create an environment that has allowed informality to flourish in LAC. Although output informality in LAC has steadily declined over the past two decades, it remains slightly higher than the EMDE median. The trend in employment informality has been less clear. The COVID-19 pandemic has brought new challenges: providing income support to informal workers, many of whom were already living hand-to-mouth before the pandemic and have faced severe income losses during it, became an urgent priority.

Although the quality of institutions in LAC is on average stronger than in EMDEs as a whole, countries in the region with low institutional quality indicators have higher informality. Informality has increased in countries with rampant corruption. High tax rates or burdensome tax regulations may also have encouraged firms to stay in the informal sector. Informality in LAC has been associated with weak growth of output and labor productivity, as well as worse poverty and inequality outcomes. Redesigning tax policy, increasing enforcement of labor laws, and improving the business climate have had some success in reducing informality in the region.

Evolution of informality in LAC

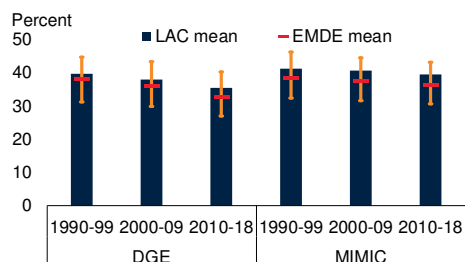
Output informality in LAC has fallen over the past two decades. On average, informal output was equivalent to 35 percent of official GDP in 2010-18, marginally higher than the EMDE average, down from 40 percent in 1990-99 (figure 5.8). A survey-based measure of perceptions of informal activity has also fallen. However, informal employment (measured by self-employment) as a share of total employment increased by about 2 percentage points from 1990-99 to 2010-18, to 36 percent, which was still below the EMDE average. The COVID-19 pandemic is likely to have sharply increased the informal share of employment, at least temporarily, and at the same time, informal workers have suffered disproportionately large income losses.

The decline in output informality over the past two decades has been broad-based across the region (figure 5.8). Several of the countries with the highest incidence of output informality, such as Bolivia, Panama, and Peru, experienced some of the largest declines over the past two decades, in part due to rapid formal job creation in the context of strong output growth. In most countries, employment informality is higher than output informality, reflecting lower productivity in the informal than the formal sector.

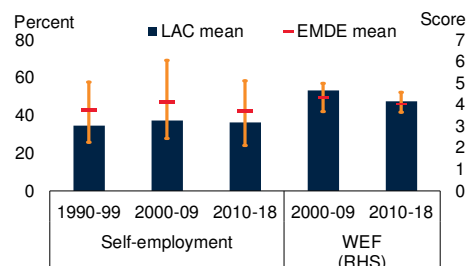
FIGURE 5.8 Informality in Latin America and the Caribbean (LAC)

Output-based informality in LAC has fallen since the 1990s, on average, but remains above the EMDE median. Employment-based informality has been stable in the region as a whole; it has increased in several countries.

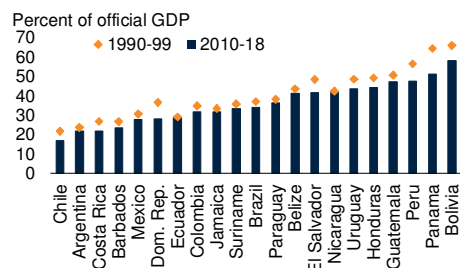
A. Output informality



B. Employment informality and perceptions of informality



C. Output informality in selected economies



D. Employment informality in selected economies



Sources: International Labour Organization; World Bank; World Economic Forum (2018).

Note: Dom. Rep. = Dominican Republic; EMDE = emerging market and developing economies; LAC = Latin America and the Caribbean.

A.B. Blue bars show unweighted averages of the informal economy of the region. Red markers show unweighted averages of all EMDEs and the vertical lines denote the interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model; MIMIC = multiple indicator multiple causes model. Both models estimate the size of the informal sector 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-employment is measured as percent of total employment. The World Economic Forum (WEF) asks the following 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)." The average responses are used to capture the extent of perceived informality. The index is reversed here so that a lower WEF index indicates a larger informal economy. Self-employment sample includes 32 LAC economies and 134 EMDEs; WEF sample includes 25 LAC economies and 114 EMDEs.

C. Output informality is based on DGE estimates, in percent of official GDP.

D. Employment informality is based on self-employment as a share of total employment.

The broad-based decline in output informality in recent decades did not occur for employment informality, in part reflecting the effects of trade liberalizations in the 1990s in contexts of heavily regulated labor markets (figure 5.8; chapter 4). In fact, informal employment in countries such as Bolivia, Colombia, Honduras, and Peru increased. Even where employment informality fell overall, the decline was not always widespread. In Brazil and Argentina, two of the largest economies in LAC, middle-aged men, the highly skilled, and full-time workers were the most likely to shift from informal to formal employment during the 2000s (Maurizio 2015).

Correlates of informality in LAC

Informality in LAC is associated with economic and institutional factors such as trade liberalization, worker characteristics, tax policy, and governance.

Trade liberalization. The reduction of trade barriers in LAC in the 1980s and 1990s led to fears that domestic firms in the formal sector would become uncompetitive and shift to the informal sector to reduce costs. The effects of trade liberalization on informality have actually been mixed across countries and different in the short run from the long run (Bosch, Goñi-Pacchioni, and Maloney 2012; Menezes-Filho and Muendler 2011). It has been found that in the presence of labor market rigidities, informal employment may rise in the short term after trade liberalization but not necessarily in the long term (Ponczek and Ulyseas 2018; World Bank 2019b). In Brazil and Peru, trade liberalization was associated with increases in informality as formal firms exited to the informal sector or increasingly hired informal workers, or workers increasingly worked informally (Cisneros-Acevedo forthcoming; Dix-Carneiro and Kovak 2019). In Colombia, trade liberalization was associated with a slight increase in informality, but only before a subsequent reform that increased labor market flexibility (Goldberg and Pavcnik 2003).

Voluntary movement between formal and informal employment. Switching between the formal and informal sectors is common in the largest economies in the region (Bosch and Maloney 2010; Fiess, Fugazza, and Maloney 2008; Perry et al. 2007). This may reflect responses to swings in employment and income opportunities in the formal sector. Other structural factors, such as poor education and skills, could also account for employment informality (Fernández and Villar 2016).

Tax burdens. High tax rates or burdensome tax regulations have encouraged informality in the region (Loayza 1997; Ordóñez 2014; Vuletin 2008). During 2010-18, average corporate and personal incomes tax rates were significantly higher in EMDEs with above-median output informality than in those with below-median output informality (chapter 6). 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 (figure 5.9).

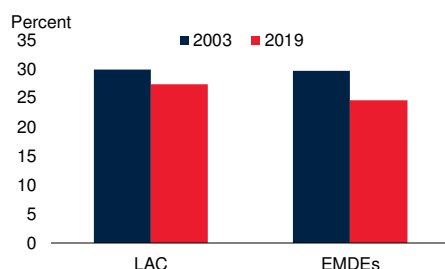
Institutional quality. In LAC, most of the institutional measures associated with informality are at, or slightly better than, the EMDE average. But there is heterogeneity within the region. LAC economies with weak institutional quality have also tended to be those with high informality (figure 5.9). For instance, higher employment informality in Peru than in Chile has been attributed to poorer governance in Peru (Loayza and Wada 2010). Informality in LAC countries has also been attributed to restrictive business and labor regulations, which discourage firms from entering the formal sector.⁷

⁷ See, for instance, Dougherty and Escobar 2013; Estevão and de Carvalho Filho 2012; Loayza 1997; Loayza, Servén, and Sugawara 2010; and Vuletin 2008.

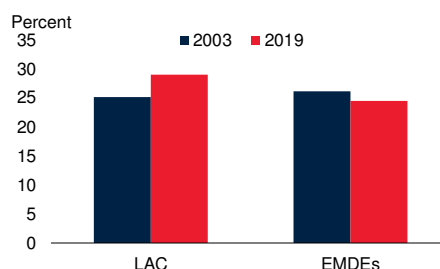
FIGURE 5.9 Correlates of informality in Latin America and the Caribbean (LAC)

In LAC economies where government effectiveness is poor, output-based informality tends to be high. Self-employment tends to be high where labor market efficiency is low. As of 2019, both corporate and personal income tax rates were higher in LAC than in the average EMDE.

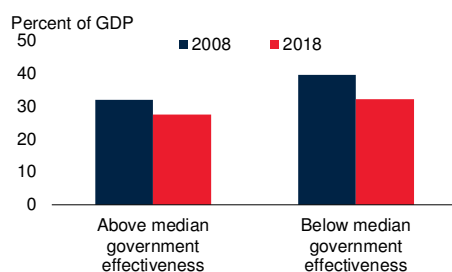
A. Corporate income tax rates



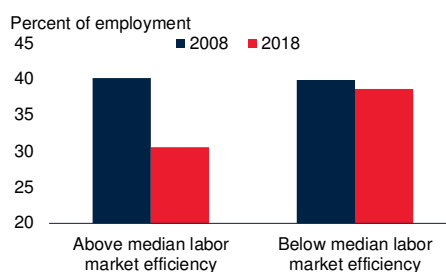
B. Personal income tax rates



C. Output informality and government effectiveness



D. Employment informality and labor market efficiency



Sources: International Labour Organization; Végh and Vuletin (2015); World Bank (Worldwide Governance Indicators); World Economic Forum (2018).

Note: EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean.

A.B. Unweighted sample averages.

A. Sample includes 17 LAC economies and 49 EMDEs.

B. Sample includes 17 LAC economies and 47 EMDEs.

C. Output informality is based on dynamic general equilibrium (DGE) model estimates, in percent of official GDP. "Above (Below) median" are EMDEs in the LAC region with above- and below-median government effectiveness within the corresponding year (2008 or 2018). Sample includes 32 LAC economies.

D. Employment informality is self-employment as a share of total formal employment. Bars show medians. "Above (Below) median" are EMDEs in the LAC region with above- and below-median labor market efficiency within the corresponding year (2008 or 2018). Labor market efficiency measures flexibility and efficient use of talent. Sample includes 16 LAC economies.

Policy options to address informality challenges in LAC

Designing policies to address informality requires an understanding of its causes and characteristics. These vary considerably in LAC, even within individual countries (Fernández and Villar 2016; Perry et al. 2007). Policies that have been successful in addressing informality in LAC have taken account of these factors, focusing variously on reducing tax burdens, strengthening enforcement of labor regulations, and removing disincentives to formal employment.

Tax policy reforms. Making tax policy less burdensome, by simplifying tax systems or lowering tax rates, 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 employment informality in the main metropolitan areas by about 7 percentage points (Fernández and Villar 2016). A reduction and simplification of business taxes in Brazil in 1996 was associated with a significant increase in the incidence of formal firms, and the newly formal firms achieved higher revenue and profits than those operating informally (Fajnzylber, Maloney, and Montes-Rojas 2011). The impact of Brazil's reform on informality varied across economic sectors, however, because of differences in incentives to become formal (Monteiro and Assunção 2012).

Labor market regulations. Tighter enforcement of labor regulations has been effective in reducing informality in the region, through various mechanisms. In Brazil, tighter enforcement of regulations raised wages and output by improving the allocation of workers between the formal and informal sectors (Meghir, Narita, and Robin 2015). More frequent inspections in Brazil also induced some informal workers to become formal (Almeida and Carneiro 2012). Moreover, inspections have been found to be 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 to ease barriers to entering the formal sector have had mixed results. A reform that simplified the process of opening a business in Mexico was successful in increasing the number of registered businesses, but had no impact on informality: the owners of the new businesses were former employees of formal firms, not informal workers (Bruhn 2011; Kaplan, Piedra, and Seira 2011). Financial deepening contributed to a reduction in informality in Uruguay, particularly for women and older workers (Gandelman and Rasteletti 2016).

COVID-19 response. The provision of income support to informal workers during the COVID-19 pandemic has been challenging. In some cases, existing programs have been successfully scaled up, particularly for the lowest-income informal workers. But even where informal workers have been reached, there have been challenges related to coverage (Busso et al. 2020). One lesson is that the provision of social safety nets needs to be more agile, with low barriers to enrollment and provisions for rapid rollout (Arnold, Garda, and Gonzalez-Pandiella 2020).

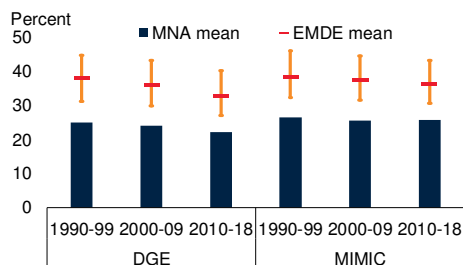
Middle East and North Africa

On average, MNA has the lowest output and employment informality among all EMDE regions. There is particularly wide divergence within the region, however, consistent with the wide range of per capita incomes across MNA economies (figure 5.10). Output informality in oil importers and non-Gulf Cooperation Council (GCC) oil exporters is well above that in GCC countries, reflecting a sizable presence of agriculture sectors in some countries, as well as histories in some cases of prolonged armed conflict with associated migration, and high reliance on public sector

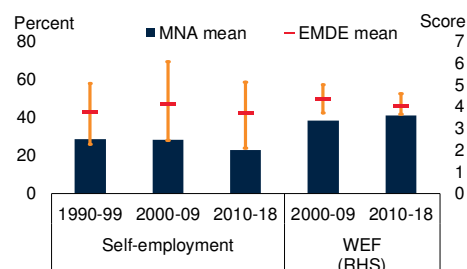
FIGURE 5.10 Informality in the Middle East and North Africa (MNA)

Informal sector output in the MNA accounts for about one-quarter of official GDP, lower than in other EMDE regions. However, perceptions of informality in MNA have risen somewhat, while they have declined in the median EMDE. Informal activity is relatively low in Gulf Cooperation Council (GCC) economies.

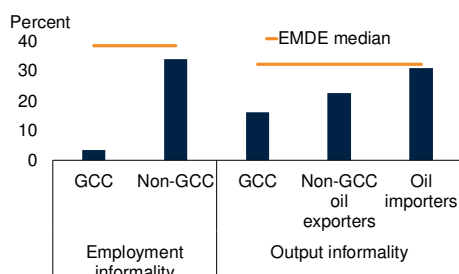
A. Output informality



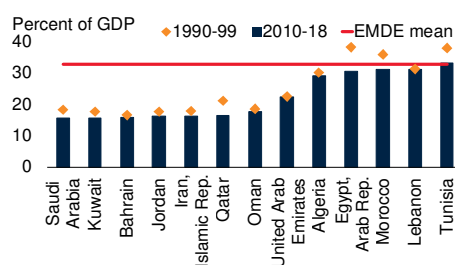
B. Employment informality and perceptions of informality



C. Informality by economy groups



D. Output informality in selected economies



Sources: International Labour Organization; World Bank; World Economic Forum (2018).

Note: GCC = Gulf Cooperation Council; EMDE = emerging market and developing economies; MNA = Middle East and North Africa. A.B. Blue bars show unweighted averages of the informal economy of the region. Red markers show unweighted averages of all EMDEs and the vertical lines denote the interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model; MIMIC = multiple indicator multiple causes model. Both models estimate the size of the informal sector as a percent of official GDP. DGE sample includes 15 MENA economies and 122 EMDEs; MIMIC sample includes 16 MENA economies and 124 EMDEs.

B. Self-employment is measured as percent of total employment. The World Economic Forum (WEF) asks the following 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)." The average responses are used to capture the extent of perceived informality. The index is reversed here so that a lower WEF index indicates a larger informal economy. Self-employment sample includes 16 MENA economies and 134 EMDEs; WEF sample includes 16 MENA economies and 114 EMDEs.

C. Output informality is based on DGE estimates, in percent of official GDP. Employment informality is self-employment as a share of total employment. Bars and lines show medians of economy averages during 2010-18 in corresponding economy groups. Sample includes 6 GCC economies and 10 non-GCC economies (employment informality) and 6 GCC economies, 2 oil exporters, and 5 oil importers (output informality).

D. Output informality is based on DGE estimates, in percent of official GDP. Bars and diamonds show unweighted period averages. The line shows the unweighted average for EMDEs over the period 2010-18.

employment. Informal activity in these economies absorbs a large proportion of the region's high numbers of unemployed youth. By contrast, employment informality in GCC countries is very low, averaging 3 percent of total employment in 2010-18. This is broadly in line with the high per capita incomes of GCC countries.

Several non-GCC economies have reduced informality over the past two decades. Policies that could be effective in further addressing informality in MNA include building better institutions to spur private sector activity, fiscal reforms to reduce tax burdens and improve revenue collection, increased access to finance, and better education and training for vulnerable groups.

Evolution of informality in MNA

On average in 2010-18, informal output in MNA was equivalent to 22 percent of GDP and informal employment stood at 23 percent of total employment (figure 5.10), substantially below the EMDE averages. Output informality in MNA declined slightly over the past three decades, by 3 percentage points of GDP between 1990-99 and 2010-18, while employment informality fell by 6 percentage points of total employment. Perceptions of informal activity, however, have risen.⁸

In most of the region, declines in informality in recent decades have been very limited (figure 5.10). Some non-GCC economies, such as the Arab Republic of Egypt, Morocco, and Tunisia, have made progress in reducing output informality. Among GCC countries, informality in Qatar has declined the most.

Correlates of informality in MNA

Informality in MNA reflects economic and development challenges ranging from limited private sector activity to armed conflict. Large informal sectors have been associated with weak human capital, low labor productivity and wages, and less inclusive growth. Although informality can provide helpful employment opportunities where the formal sector suffers from severe distortions and governance is poor, the structural, policy, and institutional causes of informality pose challenges for efforts to diversify economies and reduce reliance on commodity production and the public sector.

Economic structure. Low informality in GCC countries in part reflects high reliance on expatriate workers and, in some countries, high public employment of nationals (World Bank 2018a). Urban workers in MNA are less likely to be informally employed than rural workers (Angel-Urdinola and Tanabe 2012).

Conflict. The MNA region has experienced numerous armed conflicts, some prolonged, in recent decades. In Iraq and the Syrian Arab Republic, violent conflicts have severely limited the number of public sector jobs, and many workers have moved into the informal sector for lack of alternatives (Ianchovichina and Ivanic 2014; World Bank 2017). In Jordan and Lebanon, the massive influx of refugees—many of whom are

⁸ Before 2012, perceptions of informal activity in MNA was broadly constant. The recent increase could be due to the Arab Spring in 2011 and associated disruptions of activity and policing and enforcement (for instance, for Egypt and Tunisia; Brown, Kafafy, and Hayder 2017). Informal employment and employment outside the formal sector have also increased in Egypt (Elsayed and Wahba 2019; ILO 2019), while self-employment has remained stable.

unregistered—has enlarged the informal sector, where jobs tend to be labor-intensive and low skilled (Verme et al. 2016).

Governance and business climate. Informality in MNA economies is closely and negatively correlated with the quality of governance (Elbadawi and Loayza 2008). In non-GCC economies, government effectiveness and regulatory quality are substantially worse than EMDE averages, after deteriorating markedly between 2010 and 2018 (figure 5.11). These issues are further compounded by poor public services and burdensome taxation, both of which raise the costs of operating in the formal sector (World Bank 2016).⁹ Such hindrances incentivize firms and workers to remain in the informal sector, where labor productivity is lower.¹⁰

Policy options to address informality challenges in MNA

Widespread informality in non-GCC MNA economies reflects deep-rooted structural challenges, such as high youth unemployment and bloated public sectors that can no longer absorb additional public servants (IMF 2018).¹¹ Public sector employment constitutes more than a quarter of total employment in these economies, on average—well above the EMDE average (figure 5.11). The focus has therefore been on multi-pronged policies that aim to create a more vibrant private sector, especially to encourage small firms to grow and boost the human capital of workers so that they can be productively employed in a reinvigorated private sector. Policies targeting specific vulnerable groups can lessen the negative externalities associated with informality.

Fiscal reforms. Burdensome taxation has been a major constraint on formal sector firms in MNA (Gatti et al. 2014). In non-GCC MNA economies, reforms to align tax systems with international best practices and strengthen enforcement could encourage formalization while also raising revenues. Such reforms could include reducing excessive corporate tax burdens and enhancing revenue collection through harmonized electronic filing systems (for example, Morocco) or the introduction of a value-added tax (for example, Egypt). In Egypt, reduction of the corporate tax burden has been associated with higher revenues through a broader tax base (Gatti et al. 2014).

Building institutions. Public sector effectiveness and regulatory quality in non-GCC MNA economies have deteriorated in the last decade (figure 5.11). Corruption is cited among the biggest hindrances to MNA firm operations, incentivizing firms and workers to operate informally (World Bank 2016). Policies that reduce regulatory costs help increase the movement of informal firms from to the formal sector, while reforms that

⁹ While informal business operations are likely to make lower contributions to government revenues, they may add to utilization of public services, such as provision of infrastructure (Galal 2005).

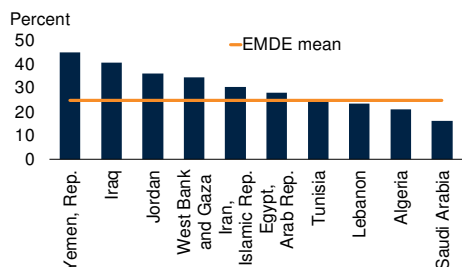
¹⁰ Based on Enterprise Survey data, a sizable proportion of firms in oil-importing economies, such as Morocco and Tunisia, consider competitors' practices in the informal sector as hindering their own business operations (World Bank 2004).

¹¹ These two issues may be linked. Informality is high among the young, in part reflecting the entrance of workers into public sector jobs at a later age (Angel-Urdinola and Tanabe 2012; Elbadawi and Loayza 2008).

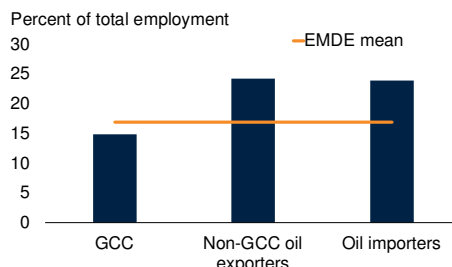
FIGURE 5.11 Correlates of informality in the Middle East and North Africa (MNA)

High informality in non-GCC MNA economies reflects deep-rooted structural challenges, such as high youth unemployment and bloated public sectors that can no longer absorb additional public servants. Policies to improve access to finance and government effectiveness can help shift resources from the informal to the formal sector.

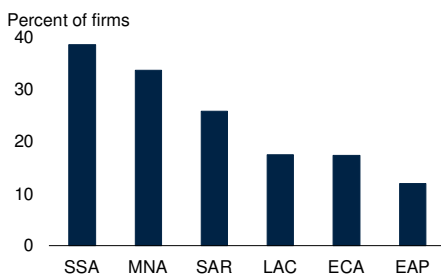
A. Youth not employed and not in education



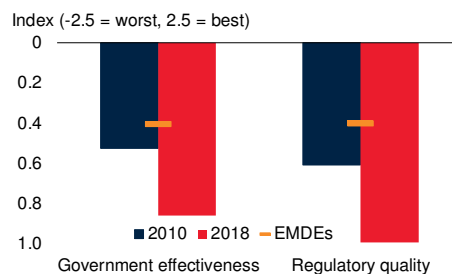
B. Public sector employment



C. Firms citing access to finance as biggest obstacle



D. Government effectiveness and regulatory quality in non-GCC economies



Sources: International Labour Organization; World Bank (Enterprise Surveys, Worldwide Governance Indicators).

Note: EMDE = emerging market and developing economies.

A. Bars show data for latest available year from 2010 onward. Line shows unweighted average of 121 EMDEs using data for latest available year from 2010-20.

B. Bars show unweighted averages of 6 GCC economies, 3 non-GCC oil exporters, 7 oil importers, and 131 EMDEs. Public-sector employment includes employment in the government and publicly-owned companies. GCC = Gulf Cooperation Council. Based on the latest available data from 2010-20.

C. Percent of firms citing access to finance as their biggest obstacle, based on World Bank Enterprise Surveys (surveys in the MNA region exclude GCC economies). EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. Bars show unweighted averages.

D. EMDEs denotes unweighted average during 2010-18. Sample includes 13 non-GCC economies.

strengthen property rights may assist rural and agricultural-sector populations to access financing (for example, enabling collateralized loans). Policies to promote entrepreneurial activities, such as easing of business licensing requirements, can also facilitate entry of informal workers into more productive jobs in the formal sector.

Increasing access to finance. Access to finance is a more binding constraint on doing business in MNA than in most other EMDE regions (figure 5.11; Farazi 2014). Improving such access, including through stronger legal frameworks and improved

credit protection regimes, can promote formal private sector activity by increasing the transparency of firms to investors and facilitating investment (Straub 2005). Several MNA economies have recently implemented policies in this area, such as new insolvency resolution laws in Egypt, Saudi Arabia, and the United Arab Emirates. The adoption of financial technologies (fintech), such as innovations that automate financial transactions, can also facilitate access to financial services by informal unbanked individuals and SMEs (Lukonga 2018; World Bank 2018b).

Investing in human capital. Policies that expand job training are especially relevant for the young, who are commonly informally employed in MNA, to facilitate their entry into more productive, formal jobs (figure 5.11; Angel-Urdinola and Tanabe 2012). Training programs may be particularly effective if they are coupled with mechanisms to increase women's mobility, which is constrained in the region, and offer a combination of soft and hard skills (figure 5.11). The extension of training to rural areas, where education levels are low, could also be especially beneficial; the region's training programs currently tend to serve higher-income and more educated individuals (Angel-Urdinola, Semlali, and Brodmann 2010). A holistic approach that combines job training with job creation, such as through public-private sector programs, could boost informal workers' earnings (Steel and Snodgrass 2008). In MNA, unemployment rates are higher among university graduates than among low-skilled workers. Thus, education system reforms that are coupled with private sector development (the demand side of the labor market) may be more effective at generating high-quality employment.

South Asia

Employment informality in SAR is pervasive. SAR is home to the highest number of informal workers among the six EMDE regions, accounting for close to two-fifths of the world total. Output informality has declined in recent decades, however. Low labor productivity is a long-standing feature of the region's informal sector.

The pervasiveness of employment informality reflects large artisanal and agricultural sectors and the dominance of micro and small business units, often family businesses. High unemployment among the low-skilled, rural, female, and young populations pushes workers into the informal sector. High informality in the region is also associated with weak institutions and poor business climates. Policies that focus on improving the business environment and addressing skills gaps in vulnerable groups can help promote movement to the formal sector.

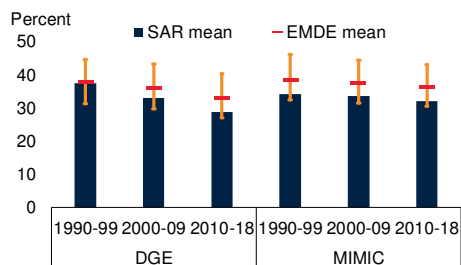
Evolution of informality in SAR

Informal employment in SAR, at 59 percent of total employment in 2010-18, was the highest among all EMDE regions, and well above the EMDE average of 42 percent. However, employment informality has also declined the most of any region since the 1990s (figure 5.12). Using an alternative measure, lack of basic pension coverage, 90 percent of the labor force in SAR works informally.

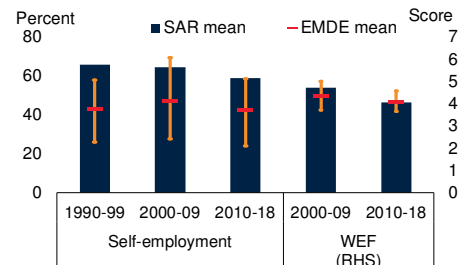
FIGURE 5.12 Informality in South Asia (SAR)

SAR's share of informal employment is the largest among EMDE regions, despite a below-average share of informal output. Employment informality in the region has remained broadly unchanged over the past two decades but output informality has declined rapidly. Persistent low productivity has therefore been a long-standing feature of the region's informal sector.

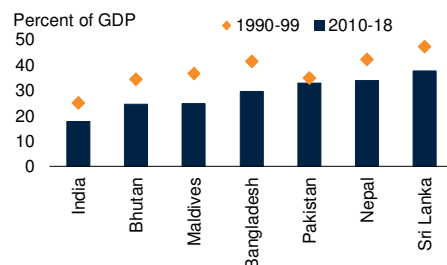
A. Output informality



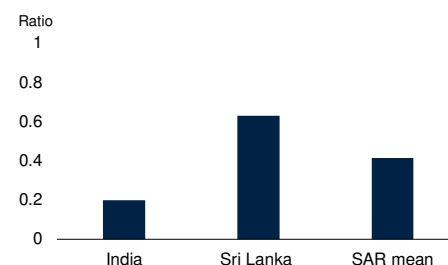
B. Employment informality and perceptions of informality



C. Output informality in selected economies



D. Ratio of informal to total labor productivity



Sources: International Labour Organization; World Bank; World Economic Forum (2018).

Note: EMDE = emerging market and developing economies; SAR = South Asia.

A.B. Blue bars show unweighted averages of the informal economy of the region. Red markers show unweighted averages of all EMDEs and the vertical lines denote the interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model; MIMIC = multiple indicator multiple causes model. Both models estimate the size of the informal sector as a percent of official GDP. DGE sample includes 7 SAR economies and 122 EMDEs; MIMIC sample includes 7 SAR economies and 124 EMDEs.

B. Self-employment is measured as percent of total employment. The World Economic Forum (WEF) asks the following 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)." The average responses are used to capture the extent of perceived informality. The index is reversed here so that a lower WEF index indicates a larger informal economy. Self-employment sample includes 7 SAR economies and 134 EMDEs; WEF sample includes 6 SAR economies and 114 EMDEs.

C. Output informality is based on DGE estimates, in percent of official GDP.

D. SAR sample includes 7 economies.

Although there is evidence that the COVID-19 pandemic has been accompanied by a movement of formal workers into the informal sector, informal workers were more vulnerable to loss of employment in the early stage of the pandemic, when lockdown measures were most stringent (World Bank 2020d). In India, lockdown measures are estimated to have tripled the urban unemployment rate in the early stages of the pandemic. The income losses associated with these lost jobs were exacerbated by the fact that some 60-85 percent of urban workers had no access to social protection benefits,

making reaching them through relief programs more challenging (Bussolo, Kotia, and Sharma 2021; Dhingra 2020).

Output informality in SAR has also fallen, to 29 percent of official GDP in 2010-18 from 38 percent in 1990-99. Survey-based measures of perceptions of informal activity also indicate a decline.

Sri Lanka has the highest informal output share in the region, at 35 percent of GDP in 2010-18, while India has the lowest, at 17 percent (figure 5.12). This order is reversed when considering employment informality, which was 76 percent of total employment in India in 2010-18 and 42 percent in Sri Lanka, reflecting greater disparities in labor productivity between the formal and informal sectors in India than in Sri Lanka.

Correlates of informality in SAR

High employment informality in SAR is associated with weak human capital development, poor business conditions and limited access to financial resources. Informality has adverse implications for poverty and inequality reduction, especially where fiscal revenues available to fund development objectives are limited.

Human capital. SAR has the second lowest average years of schooling among EMDE regions, behind only SSA (Barro and Lee 2013).¹² Low levels of education limit opportunities for employment in the formal economy. Conditions in slums, home to 130 million South Asians, entrench large education gaps (Ellis and Roberts 2016). In Bangladesh, for example, the net school enrollment rate of children living in informal communities is 15 percentage points below the national average (Kabir and Parajuli 2016).

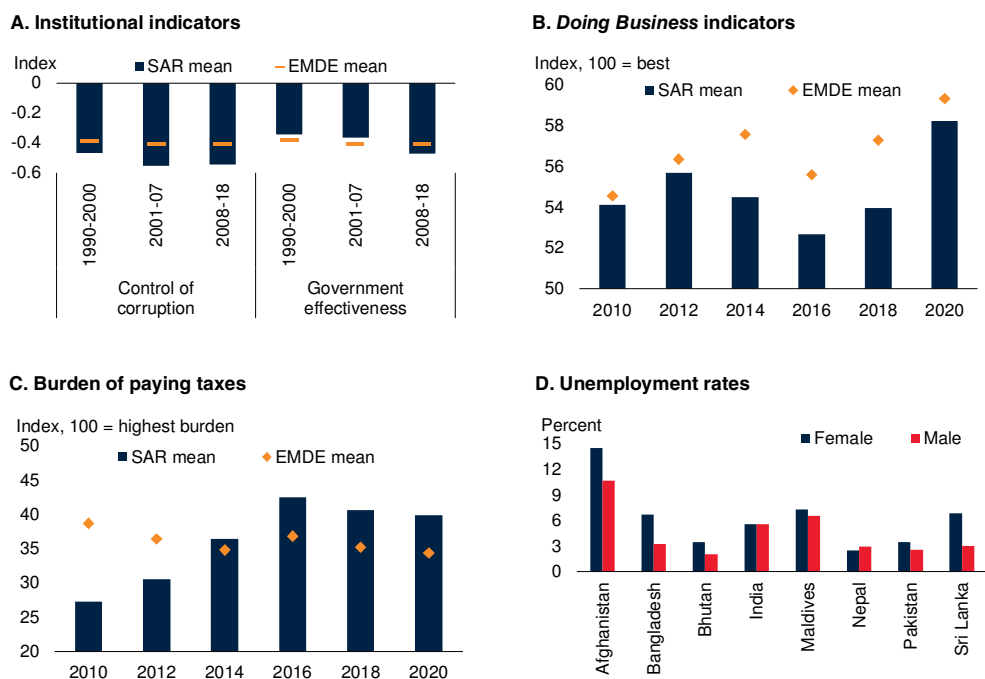
COVID-19 impact. The negative effects of the COVID-19 pandemic on human capital accumulation may have implications for future informality in SAR. A decline in the duration of schooling during the pandemic may ultimately push more of the labor force into the informal sector, where they will face lower earnings. It is estimated that average lifetime earnings in South Asia will decline by 5 percent because of the pandemic (Azevedo et al. 2020; World Bank 2020d).

Worker characteristics. South Asia's informal labor force consists predominantly of low-skilled, rural, female, or young workers (Goldar and Aggarwal 2012; Gunatilaka 2008; Parajuli 2014). Such worker characteristics contributed to a wider labor productivity gap between formal and informal sectors in SAR than in other EMDE regions (Loayza 2018). For many, the informal sector is the only option for earning a livelihood. In Pakistan, the characteristics of individuals, such as older age and higher levels of education, have been found to be more predictive of formal employment than the institutional environment (Williams, Shahid, and Martinez 2016).

¹² Average years of schooling in Afghanistan, Nepal, and Pakistan were lower than the SSA average in 2010, the most recent year of available data.

FIGURE 5.13 Correlates of informality in South Asia (SAR)

Weak control of corruption, low government effectiveness, and heavy tax burdens have likely contributed to high employment informality in SAR. Unemployment is higher among women, who represent a larger share of informal workers than men.



Sources: International Labour Organization; World Bank (*Doing Business*, Worldwide Governance Indicators).

Note: EMDE = emerging market and developing economies; SAR = South Asia.

A. The score ranges from -2.5 to 2.5. A higher score represents better performance.

B. The index represents the distance to the frontier in the World Bank's *Doing Business*. An economy's ease of doing business score is calculated on a scale from 0 to 100.

C. The index represents the distance to the frontier of the ease of paying taxes indicator in the World Bank's *Doing Business*. The value is subtracted from 100 to reflect tax burden.

D. Bars show unemployment rates for the labor force ages 15 and above during 2010-20.

Business climate. Over the past decade, SAR has suffered greater corruption and weaker government effectiveness than EMDEs on average (figure 5.13). The business environment in SAR—such as the burden of tax rates and compliance, labor regulations, and the ease of starting a business—is also less favorable than in the average EMDE, and has been associated with high informality (Goldar and Aggarwal 2012; FICCI 2017; Waseem 2018).

Policy options to address informality challenges in SAR

Policies to address the challenges related to informality in SAR could prioritize addressing weak human capital in vulnerable groups and improving access to finance and public services. Also important, including for the creation of a more conducive

climate for private sector development, would be strengthening governance and reducing regulatory burdens.

The COVID-19 pandemic has highlighted structural problems in the informal sector in South Asia (Kesar et al. 2021; World Bank 2020d). In the short run, policy makers can provide relief to the informal sector, and in the long run increase the inclusivity of universal social protection systems.

Investing in human capital. Unemployment is particularly high among young, low-skilled, female, and rural workers (figure 5.13). These groups often seek employment in the informal sector. Policies targeting training and education of these groups, especially in rural areas, could help their transition to formal employment (Khera 2016).

Increasing access to resources. Greater access to credit for informal workers could encourage formalization in South Asia (Beck and Hoseini 2014; Ghani, Kerr, and O'Connell 2013). Expanding access to microfinance has led to increasing investment and productivity in the informal sector (Donou-Adonsou and Sylwester 2017; Imai and Azam 2012). High-quality public services can also provide an incentive for informal firms to become formal in order to access them.

Building institutions. There is significant room for improvement in SAR's business environment, including improving government effectiveness and controlling corruption. Measures to reduce regulatory burdens would also improve the business climate and foster growth (FICCI 2017). This could reduce informality by reducing the costs of entry to, and operating in, the formal sector. Enhanced monitoring and enforcement, including of tax regulations, could help discourage informality (Ilzetzki and Lagakos 2017). In India, the recent introduction of a Goods and Services Tax is expected to encourage formalization of activity.

Sub-Saharan Africa

Informality in SSA is very high by multiple measures. In some countries, informal employment exceeds 80 percent of total employment. In others, informal output is equivalent to more than half of official GDP. SSA had the highest employment informality of the six EMDE regions in 2010-18, and along with ECA and LAC, also had the highest output informality.

Numerous factors related to underdevelopment are associated with informality in SSA, including weak institutions, large rural and agricultural sectors, armed conflicts, and low human capital. The high incidence of poverty and inequality is also closely linked to the prevalence of large informal sectors.

Governments in SSA have struggled with how to address high levels of informality. There is a growing recognition of the key role of the informal economy in the region's development, and of the potential of the resources it employs if policies were more attuned to their mobilization.

Evolution of informality in SSA

Informal output in SSA was 36 percent of official GDP, on average, in 2010-18, the highest among EMDE regions and slightly above the shares in LAC and ECA (figure 5.14). Informal employment (measured by self-employment), at 51 percent of total employment, is the second highest after SAR. Alternative measures of informality, such as the share of labor without pension coverage (90 percent) and perceptions of informal activity, are also among the highest of EMDE regions.

Over the past two decades, both output and employment informality in SSA have fallen somewhat, by 5 and 6 percentage points, respectively. Relative to other EMDE regions, the decline in employment informality was large, whereas the fall in output informality was broadly in line with the EMDE average. That said, several SSA countries have made more significant progress in lowering output informality (figure 5.14).

Informality is higher in low-income countries (LICs), fragile states, and commodity exporters. Informal employment exceeded 80 percent of total employment, on average, in Benin, Burundi, Madagascar, and Uganda during 2010-18, whereas it was less than 20 percent in Mauritius and South Africa. Among sub-regions, central and western Africa had the highest average shares of informal employment during 2010-18, at 80 percent and 74 percent, respectively, compared to 50 percent in southern Africa.

Correlates of informality in SSA

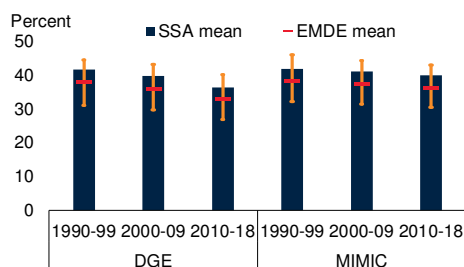
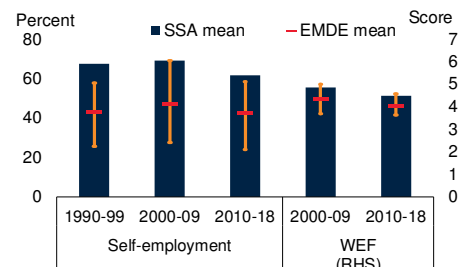
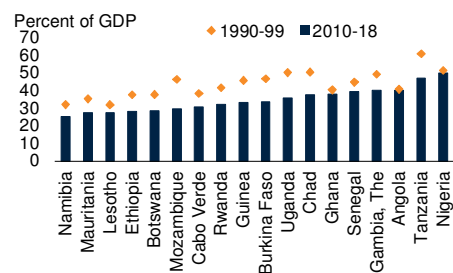
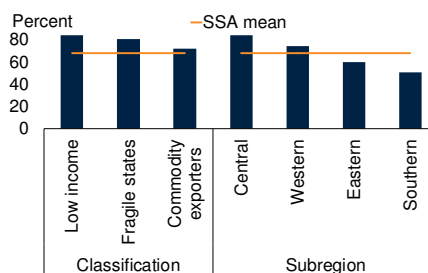
High informality in SSA reflects wide-ranging economic and development challenges, including poor institutions, labor and product market rigidities, armed conflict, limited access to resources, and a dearth of skilled labor (Lince 2011; Xaba, Horn and Motala 2002).

Fragility and conflict. As of 2021, SSA hosts all but six of the world's 29 LICs and more than half of the world's 39 fragile states. In general, informality is higher in low-income SSA countries—especially in fragile states with weak state capacity—than elsewhere in the region. Economic disruptions related to conflict and violence have been an important factor forcing people to earn their livelihoods in the informal economy (Heintz and Valodia 2008).

Economic structure. In commodity-exporting countries, the capital-intensive mining sector creates few formal employment opportunities (and artisanal mining creates informal employment opportunities). Moreover, most economies in SSA have large agricultural sectors that have high rates of self-employment. In non-agricultural sectors, there is also considerable self-employment in labor-intensive services, such as street vendors, craftsmen, and home-based activities (Fox and Sohnesen 2012). Rural-to-urban migration and increased labor force participation, especially among women, have been mostly absorbed by the informal sector (Kessides 2005). In countries where social norms restrict the mobility of women, their only employment options are in the informal sector (ILO 2009).

FIGURE 5.14 Informality in Sub-Saharan Africa (SSA)

SSA has the highest output and employment informality of the six EMDE regions, although both measures have fallen somewhat in recent decades. Informality is highest in western and central Africa, low-income countries, fragile states, and commodity exporters.

A. Output informality**B. Employment informality and perceptions of informality****C. Output informality in selected economies****D. Employment informality by economy groups**

Sources: International Labour Organization; World Bank; World Economic Forum (2018).

Note: EMDE = emerging market and developing economies; SSA = Sub-Saharan Africa.

A.B. Blue bars show unweighted averages of the informal economy of the region. Red markers show unweighted averages of all EMDEs and the vertical lines denote the interquartile range of all EMDEs.

A. DGE = dynamic general equilibrium model; MIMIC = multiple indicator multiple causes model. Both models estimate the size of the informal sector as a percent of official GDP.

B. Self-employment is measured as percent of total employment. The World Economic Forum (WEF) asks the following 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)." The average responses are used to capture the extent of perceived informality. The index is reversed here so that a lower WEF index indicates a larger informal economy.

C. Output informality is based on DGE estimates, as percent of official GDP.

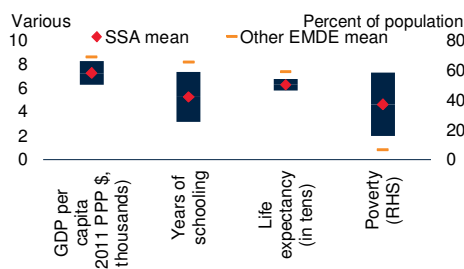
D. World Bank classifications. Bars show unweighted group averages over the period 1990-2018. Lines show unweighted averages for SSA over the same period.

Regulatory burden and governance. SSA has considerably heavier regulatory burdens than other EMDE regions (figure 5.15). Burdensome regulations such as lengthy business registration processes, cumbersome procedures for filing taxes, costly documentary compliance for exports and imports, rigid labor regulations, and high taxes can make it prohibitively expensive to operate in the formal economy (Mbaye and Benjamin 2015). SSA also has considerably weaker governance and institutions than other EMDE regions, which can result in failures in enforcing regulations and containing corruption and an environment in which informal enterprises can easily conceal their activities and evade taxes.

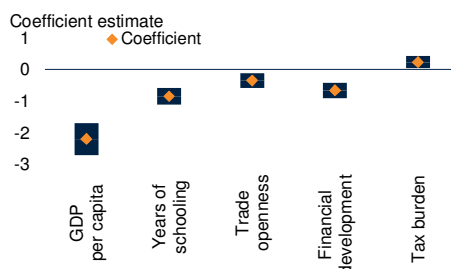
FIGURE 5.15 Correlates of informality in Sub-Saharan Africa (SSA)

Low human capital, limited access to resources, heavy regulatory burdens, and weak governance are potentially important drivers of informality in SSA.

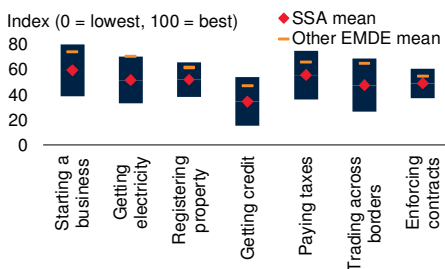
A. Economic and social characteristics



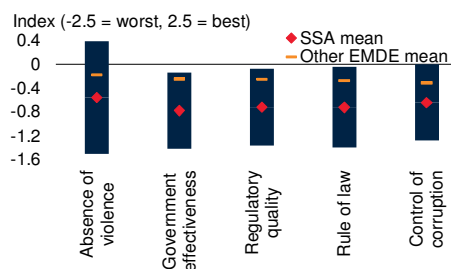
B. Economic factors



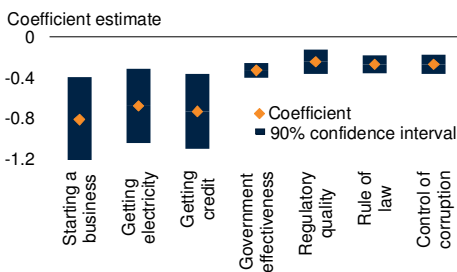
C. Doing Business indicators



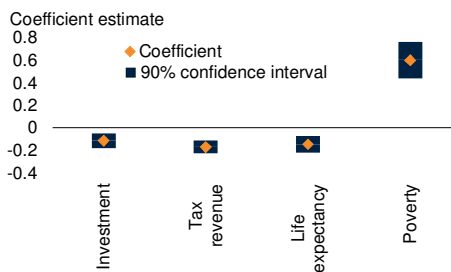
D. Governance indicators



E. Regulation and governance



F. Macroeconomic and social outcomes



Sources: Barro and Lee (2013); International Labour Organization; World Bank (*Doing Business*, World Development Indicators, Worldwide Governance Indicators).
 Note: EMDE = emerging market and developing economies; Other EMDE = EMDEs excluding those in Sub-Saharan Africa; SSA = Sub-Saharan Africa. Data are for 1990-2018 unless otherwise specified.
 A.C.D. Blue bars are +/- 1 standard deviation of SSA mean.
 A.B.F. GDP per capita is measured as thousands of 2011 PPP dollars (in logarithm). Life expectancy at birth is in years (in tens). Poverty is the headcount at \$1.90 per day (2011 PPP) as percent of population. Trade openness is the sum of exports and imports as a share of GDP. Financial development is proxied by private credit as a share of GDP. Tax burden is the total tax rate. Investment is gross fixed capital formation as a percentage of GDP. Tax revenue is expressed as a share of GDP.
 B.E.F. The orange diamonds show the coefficient estimates and the blue bars denote the 90 percent confidence intervals. Ordinary least squares (OLS) estimators are applied, with country means over the sample period used for both the dependent and independent variables. The share of self-employment in total employment is the dependent variable in panels B and E and the independent variable in panel F. The coefficient estimate measures the effect on the dependent variable of a unit change in the independent variable. Sample includes 37 SSA countries.
 C. The index represents the distance to the frontier in the World Bank's *Doing Business*. An economy's ease of doing business score is calculated on a scale of 0 (lowest performance) to 100 (best performance). Data are for 2004-18.
 D. Data are for 1996-2018.
 E. The correlates are the distance to frontier in *Doing Business* (for 2004-16) and scores from the Worldwide Governance Indicators (for 1996-2018). The coefficients for the governance and regulatory indicators are in hundredths.

Labor productivity. Differences in labor productivity between formal and informal sectors are large: value added per worker in informal firms is only 14 percent that in formal firms in the median SSA country, lower than the corresponding ratio in other EMDEs (La Porta and Shleifer 2014). Although Enterprise Surveys conducted in SSA indicate that practices of competitors in the informal sector are only the third biggest obstacle to the activities of formal firms (after access to electricity and finance) they are more problematic in SSA than in other EMDE regions (figure 5.16; Dinh, Mavridis, and Nguimkeu 2010; La Porta and Shleifer 2016; Nguimkeu 2014).

COVID-19 impact. The large pool of informal workers in SSA, already highly vulnerable to economic shocks, was poorly positioned to withstand the unprecedented supply and demand shocks caused by the COVID-19 pandemic. Further, evidence suggests that the presence of large informal sectors in the region, where workers gather in close proximity to one another, exacerbated the spread of COVID-19 (Nguimkeu and Okou 2020, 2021).

Policy options to address informality challenges in SSA

While informality is more pervasive in SSA than in other EMDE regions, the environment is conducive to a policy push to shift informal to formal activity. More SSA formal firms started out as informal and the duration of their informality was shorter than in other EMDEs (figure 5.16). Population surveys in SSA also tend to show a more positive attitude toward starting a business than surveys in other EMDE regions, despite a higher proportion of entrepreneurs who became such out of necessity. Thus in one survey, 65 percent of respondents believed that they had the required skills and knowledge to start a business, 59 percent indicated that they saw good opportunities to start a firm, and 43 percent intended to start a business within three years. This entrepreneurial spirit, despite high regulatory burdens, may make the informal sector a reservoir of untapped economic potential if allowed to flourish (de Soto 1989; Grimm, Knorringa, and Lay 2012).

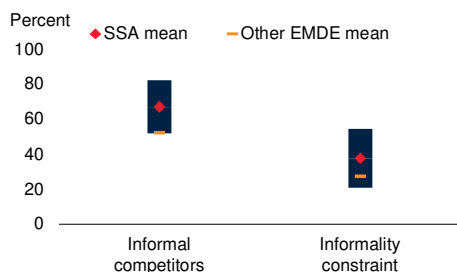
Policy makers are focusing their efforts on a combination of strategies aimed at making work more skilled and more productive. Investing in human capital, including increasing the duration of schooling and improving learning outcomes, is a critical pillar in the region's development strategy.¹³ Other policies that have been successful in addressing informality have focused on increasing access to resources, such as leveraging technology to make banking accessible to the general public and bridging small informal firms to formal markets (Benhassine et al. 2018; Nguimkeu and Okou 2019). Building better institutions would also help to foster a more conducive business environment, encouraging informal firms to operate in the formal sector and incentivizing formal firms to invest and create more job opportunities.

¹³In Kenya, for example, improved managerial skills and new marketing channels induced by competition helped metalwork enterprises in the Kariobangi Light Industries grow and transition to the formal economy (Sonobe, Akoten, and Otsuka 2011). The local government provided little support other than designating an area for these artisans to operate, but that proved sufficient.

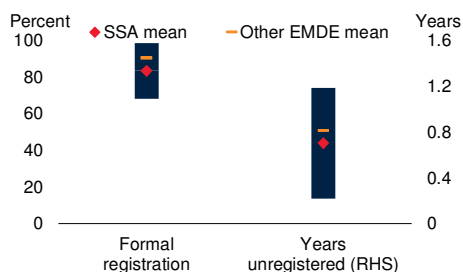
FIGURE 5.16 Informality indicators and entrepreneurial conditions in Sub-Saharan Africa (SSA)

In SSA, on average, more than 80 percent of surveyed firms lack formal registration, while about three-quarters of formal firms face competition from firms in the informal sector. There are indications of widespread entrepreneurial ambition in SSA, but potential entrepreneurs are deterred from entering the formal sector by low human capital, limited access to resources, heavy regulatory burdens, and weak governance.

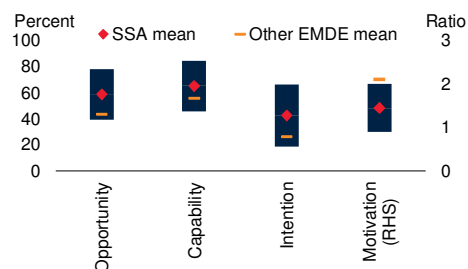
A. Informal competition



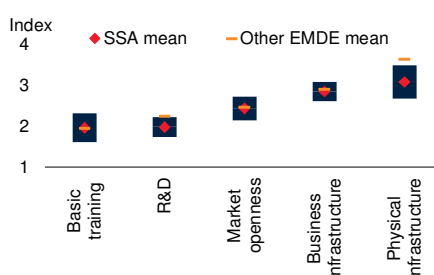
B. Formal registration of firms



C. Entrepreneurship attitudes



D. Entrepreneurial framework conditions



Sources: Global Entrepreneurship Monitor; World Bank (Enterprise Surveys).

Note: EMDE = emerging market and developing economies; Other EMDE = EMDEs excluding those in Sub-Saharan Africa; SSA = Sub-Saharan Africa. Blue bars are +/- 1 standard deviation of SSA mean.

A.B. "Informal competitors" shows the percent of firms competing against unregistered or informal firms. "Informality constraint" shows the percent of firms identifying practices of competitors in the informal sector as a major constraint. "Formal registration" shows the percent of firms formally registered when they started operations in the country. "Years unregistered" shows the number of years firms operated without formal registration. Data for 2006-18.

C. "Opportunity" is the percent of population ages 18-64 who see good opportunities to start a firm in the area where they live. "Capability" is the percent of population ages 18-64 who believe they have the required skills and knowledge to start a business. "Intention" is the percent of population ages 18-64 (individuals involved in any stage of entrepreneurial activity excluded) who are latent entrepreneurs and who intend to start a business within three years. "Motivation" is the percent of those who are either a nascent entrepreneur or owner-manager of a new business that are improvement-driven and opportunity-motivated, divided by the percentage that is necessity-motivated (a lower ratio indicates a higher proportion that is necessity-driven). Data for 2000-19.

D. Scores range from 1 to 9. A higher score represents better perceived condition. "Basic training" is the extent to which training in creating or managing small- and medium-sized enterprises (SMEs) is incorporated within the education and training system at primary and secondary levels. "R&D" is the extent to which national research and development will lead to new commercial opportunities and is available to SMEs. "Market openness" is the extent to which new firms are free to enter existing markets. "Business infrastructure" is the presence of property rights, commercial, accounting and other legal and assessment services and institutions that support or promote SMEs. "Physical infrastructure" is the ease of access to physical resources, communications, utilities, transportation, land, or space at a price that does not discriminate against SMEs. Data for 2000-19.

Investing in human capital. Policies to improve human capital can be prioritized. Fewer than 20 percent of primary school students in SSA pass a minimum proficiency threshold in learning assessment, the lowest among EMDE regions (World Bank 2019a). Teachers are often absent from classrooms. The ensuing learning deficiencies compound over time and eventually appear as a weakly skilled labor force. Although technically and politically difficult, efforts to improve learning outcomes are essential. There is also a need to address issues related to health care. COVID-19 is likely to set back human capital further, by disrupting schooling and livelihoods. To cushion the negative effects of the pandemic, concessional financing and enhanced domestic resource mobilization will be critical to ensure sufficient investment in human capital, as well as green energy and digital infrastructure, amid elevated public debt (World Bank 2021).

Improving labor productivity. Small informal firms, lacking in human capital, cannot be expected to raise the productivity of their labor forces just by registering (La Porta and Shleifer 2016). Large informal firms are likely to resemble formal firms much more than their small informal counterparts: labor productivity differentials between large informal firms and formal ones tend to be minor (Benjamin and Mbaye 2012). In west Africa, the largest and fastest growing sectors are dominated by large, informal firms. This argues for policies to encourage small firms to grow into larger, more productive ones, through skills upgrading and better access to inputs and resources such as business development services, transport and communications connectivity, financial services, health services, land and property rights, infrastructure, digital technology, and product markets (Nguimkeu and Okou 2019; Oosthuizen et al. 2016; World Bank 2021).¹⁴ As these firms become more productive, with higher quality products, they may be able to participate in formal-sector supply chains (La Porta and Shleifer 2016). For large firms or those that voluntarily remain informal to evade taxes or avoid labor codes, incentives to encourage formal registration can be combined with tighter enforcement (Mbaye and Benjamin 2015).

Building institutions. Regulatory and institutional reforms to build public trust can strengthen incentives for firms to operate formally (Mbaye and Benjamin 2015). This includes improving the business environment by removing unnecessary regulatory barriers, strengthening monitoring and enforcement capabilities, combatting corruption, and upholding legal and judicial systems. These policies apply equally to formal firms as an enabling environment is critical for investment and employment generation. Improving macroeconomic stability with sound fiscal and monetary policy frameworks is also essential.

Stakeholder engagement. Governments can actively engage with the informal community to put in place the conditions for informality to end. This can involve educating informal firms on the benefits of formal registration, providing information on formalization and the procedures involved, participating in social dialogues to

¹⁴ For example, training programs in Côte d'Ivoire have had significant positive economic results for informal workers in the agricultural and electronics sectors (Verner and Verner 2005).

understand pressing issues for informal firms, customizing household surveys to better capture important aspects of informality, and collaborating with informal actors to design and implement effective development policies.

Conclusion

The varied nature of informality in EMDEs indicates the need for policy mixes that are appropriate to each economy's circumstances. Cross-economy experiences also highlight the importance of the right policy mix. Policies that have been successful in addressing informality fall broadly into four categories: investing in human capital, improving access to resources, easing regulatory and tax burdens, and strengthening governance.

- *Investing in human capital.* In Pakistan and Côte d'Ivoire, for example, training programs boosted worker income and firm revenue in the informal sector (Burki and Abbas 1991; Verner and Verner 2005).
- *Improving access to resources.* In Kenya and Bangladesh, providing informal firms with better access to markets or finance helped increase firm profitability and investment, easing transition to the formal sector.¹⁵
- *Ease regulatory and tax burdens.* Policies to reduce tax rates and simplify tax systems have incentivized firms to transition to the formal sector in countries such as Colombia, Egypt, Mexico, and Russia.¹⁶
- *Strengthen governance.* In Georgia, during 1996-2016, the transition to a market economy brought significant improvements in government effectiveness, control of corruption, and law and order (World Bank 2019b). This was accompanied by a steep decline in informality.

The COVID-19 pandemic has taken an especially heavy toll on informal workers, who have not only faced severe income losses, but have also been difficult for social safety nets to reach to offset some of the income losses. Restrictions on physical interaction and mobility, to impede the spread of the virus, have been difficult to enforce for informal workers because many already live on the cusp of poverty, in turn blunting the public health benefits of lockdowns (Alon et al. 2020).

With good policies, effective enforcement of sensible regulations can help reduce the presence of the informal sector (Loayza 2018). In Brazil, labor inspections helped induce informal workers and firms to formalize (Almeida and Carneiro 2012; de Andrade, Bruhn, and McKenzie 2013). In ECA, better control of corruption reduced the extent of informal activities in the countries that joined the EU in the mid-2000s (Fialová and Schneider 2011). In SSA, policies have focused on unlocking the latent economic

¹⁵ See, for instance, Donou-Adonsou and Sylwester 2017; Imai and Azam 2012; and Sonobe, Akoten, and Otsuka 2011.

¹⁶ See, for instance, Bruhn 2011, Fernández and Villar 2016, Gatti et al. 2014, and Slonimczyk 2012.

potential of the informal sector through investing in human capital and improving access to resources to increase labor productivity. Such policies offer a pathway for informal firms to improve product quality and participate in formal-economy supply chains. In contrast, in ECA, LAC, and non-GCC MNA economies, successful policies have centered around easing regulatory and tax burdens and building more effective and accountable institutions—in particular, strengthening enforcement and reducing corruption. Supportive macroeconomic, structural, and social policies—such as reducing labor market rigidities and enhancing public service delivery and social protection—can ease the implementation of these reforms and facilitate smoother transitions to the formal sector.

The importance of comprehensive strategies, based on thorough economy-specific diagnoses, merits emphasis. In some instances, well-intentioned policies have turned out to aggravate the problems associated with informality. Often these policies were implemented in isolation without complementary measures. For example, trade liberalization reforms were followed by greater informality in some LAC countries, but when the reforms were accompanied by supporting policies, such as more flexible labor market regulations and well-designed social safety nets, the outcomes were more favorable.

Digital platforms offer governments opportunities to reduce regulatory burdens, strengthen tax administration, and improve the coverage of social protection programs.¹⁷ In Georgia, for example, successful tax reforms were accompanied by the introduction of an electronic tax filing system, which led to improved efficiency, a doubling of the tax-revenue-to-GDP ratio, and a reduction in employment informality by 8 percentage points between 2004 and 2011 (Akitoby 2018). In response to the COVID-19 pandemic, new online platforms (Thailand and Brazil) and new mobile payment devices (Morocco) have been utilized to help governments expand the coverage of existing social protection programs to reach informal workers (World Bank 2020e).

¹⁷ See, for instance, Gupta et al. 2017, Junquera-Valera et al. 2017, Awasthi and Engelschalk 2018, and World Bank 2020d.

References

- Abdulloev, I., I. N. Gang, and J. Landon-Lane. 2011. "Migration as a Substitute for Informal Activities: Evidence from Tajikistan." *Research in Labor Economics* 34 (6236): 205-27.
- Akitoby, B. 2018. "Raising Revenue: Five Country Cases Illustrate How Best to Improve Tax Collection." *Finance & Development* 55 (1): 18-21.
- Almeida, R., and P. Carneiro. 2012. "Enforcement of Labor Regulation and Informality." *American Economic Journal: Applied Economics* 4 (3): 64-89.
- Alon, T., M. Kim, D. Lagakos, and M. VanVuren. 2020. "How Should Policy Responses to the COVID-19 Pandemic Differ in the Developing World?" Working Paper 27273, National Bureau of Economic Research, Cambridge, MA.
- Angel-Urdinola, D. F., A. Semlali, and S. Brodmann. 2010. "Non-Public Provision of Active Labor Market Programs in Arab-Mediterranean Countries: An Inventory of Youth Programs." Social Protection Discussion Paper 55673, World Bank, Washington, DC.
- Angel-Urdinola, D. F., and K. Tanabe. 2012. "Micro-Determinants of Informal Employment in the Middle East and North Africa Region." Social Protection Discussion Paper 1201, World Bank, Washington, DC.
- Arnold, J., P. Garda, and A. Gonzalez-Pandiella. 2020. "Reaching Out to Informal Workers in Latin America: Lessons from COVID-19." *Ecoscope* (blog). June 20, 2020. <https://oecdoscope.blog/2020/06/29/reaching-out-to-informal-workers-in-latin-america-lessons-from-covid-19/>.
- Atesagaoglu, O., D. Bayram, and C. Elgin. 2017. "Informality and Structural Transformation." *Central Bank [of Turkey] Review* 17 (4): 117-26.
- Awasthi, R., and M. Engelschalk. 2018. "Taxation and the Shadow Economy: How the Tax System Can Stimulate and Enforce the Formalization of Business Activities." Policy Research Working Paper 8391, World Bank, Washington, DC.
- Azevedo, J. P., A. Hasan, D. Goldemberg, S. A. Iqbal, and K. Geven. 2020. "Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A Set of Global Estimates." Policy Research Working Paper 9284, World Bank, Washington, DC.
- Barro, R., and J-W. Lee. 2013. "A New Data Set of Educational Attainment in the World, 1950-2010." *Journal of Development Economics* 104 (September): 184-98.
- Beck, T., and M. Hoseini. 2014. "Informality and Access to Finance: Evidence from India." Mimeo. City University London.
- Benhassine, N., D. McKenzie, V. Pouliquen, and M. Santini. 2018. "Does Inducing Informal Firms to Formalize Make Sense? Experimental Evidence from Benin." *Journal of Public Economics* 157 (1): 1-14.
- Benjamin, N., and A. A. Mbaye. 2012. *The Informal Sector in Francophone Africa: Firm Size, Productivity and Institutions*. Washington, DC: World Bank.
- Betcherman, G., N. M. Daysal, and C. Pagés. 2010. "Do Employment Subsidies Work? Evidence from Regionally Targeted Subsidies in Turkey." *Labour Economics* 17 (4): 710-22.
- Bosch, M., E. Goñi-Pacchioni, and W. Maloney. 2012. "Trade Liberalization, Labor Reforms, and Formal-Informal Employment Dynamics." *Labour Economics* 19 (5): 653-67.

Bosch, M., and W. Maloney. 2010. "Labor Dynamics in Developing Countries: Comparative Analysis Using Markov Processes: An Application to Informality." *Labour Economics* 17 (4): 621-31.

Brown, A., N. Kafafy, and A. Hayder. 2017. "Street Trading in the Shadows of the Arab Spring." *Environment and Urbanization* 29 (1): 283-98.

Bruhn, M. 2011. "License to Sell: The Effect of Business Registration Reform on Entrepreneurial Activity in Mexico." *Review of Economics and Statistics* 93 (1): 382-86.

Burki, A. A., and Q. Abbas. 1991. "Earnings Functions in Pakistan's Urban Informal Sector: A Case Study." *The Pakistan Development Review* 30 (4): 695-706.

Busso, M., J. Camacho, J. Messina, and G. Montenegro. 2020. "Social Protection and Informality in Latin America during the COVID-19 Pandemic." Working Paper 10849, Inter-American Development Bank, Washington, DC.

Bussolo, M., A. Kotia, and S. Sharma. 2021. "Workers at Risk: Panel Data Evidence on the COVID-19 Labor Market Crisis in India." Policy Research Working Paper 9584, World Bank, Washington, DC.

Chatterjee, S., and S. J. Turnovsky. 2018. "Remittances and the Informal Economy." *Journal of Development Economics* 133 (July): 66-83.

Cisneros-Acevedo, C. Forthcoming. "Unfolding Trade Effect in Two Margins of Informality: The Peruvian Case." *The World Bank Economic Review*.

Dabla-Norris, E., and C. Rhee. 2020. "A New Deal for Informal Workers in Asia." *IMF Blog*, April 30, 2020. <https://blogs.imf.org/2020/04/30/a-new-deal-for-informal-workers-in-asia>.

de Andrade, G. H., M. Bruhn, and D. McKenzie. 2013. "A Helping Hand or the Long Arm of the Law? Experimental Evidence on What Governments Can Do to Formalize Firms." Policy Research Working Paper 6435, World Bank, Washington, DC.

De Soto, H. 1989. *The Other Path: The Invisible Revolution in the Third World*. New York: Harper and Row.

Demenet, A., M. Razafindrakoto, and F. Roubaud. 2016. "Do Informal Businesses Gain from Registration and How? Panel Data Evidence from Vietnam." *World Development* 84 (August): 326-41.

Dhabla-Norris, E., and C. Rhee. 2020. "A 'New Deal' for Informal Workers in Asia." *IMFBlog*, April 30, 2020. <https://blogs.imf.org/2020/04/30/a-new-deal-for-informal-workers-in-asia/>.

Dhingra, S. 2020. "Protecting Informal Workers in Urban India: The Need for a Universal Job Guarantee." *VoxEU.Org* (blog). May 2, 2020. <https://voxeu.org/article/protecting-informal-workers-urban-india>.

Díez, F., R. Duval, C. Maggi, Y. Li, I. Shibata, and M. Mendes Tavares. 2020. "Options to Support the Incomes of Informal Workers During COVID-19." International Monetary Fund Special Series on COVID-19, Washington, DC.

Dinh, H. T., D. A. Mavridis, and H. B. Nguyen. 2010. "The Binding Constraint on the Growth of Firms in Developing Countries." Policy Research Working Paper 5485, World Bank, Washington, DC.

Dix-Carneiro, R., and B. Kovak. 2019. "Margins of Labor Market Adjustment to Trade." *Journal of International Economics* 117 (March): 125-42.

- Donou-Adonsou, F., and K. Sylwester. 2017. "Growth Effect of Banks and Microfinance: Evidence from Developing Countries." *The Quarterly Review of Economics and Finance* 64 (May): 44-56.
- Dougherty, S., and O. Escobar. 2013. "The Determinants of Informality in Mexico's States." OECD Economics Department Working Paper 1043, Organisation for Economic Co-operation and Development, Paris.
- Earle, J. S., and Z. Sakova. 2000. "Business Start-ups or Disguised Unemployment? Evidence on the Character of Self-employment from Transition Economies." *Labour Economics* 7 (5): 575-601.
- EBRD (European Bank for Reconstruction and Development). 2020. "Regional Economic Prospects in the EBRD Regions. Covid-19: Early Estimates of the Damage, Uncertain Prospects." European Bank for Reconstruction and Development, London.
- Elbadawi, I., and N. Loayza. 2008. "Informality, Employment and Economic Development in the Arab World." *Journal of Development and Economic Policies* 10 (2): 27-75.
- Elgin, C., and O. Oztunali. 2014. "Institutions, Informal Economy, and Economic Development." *Emerging Markets Finance and Trade* 50 (4): 117-34.
- Ellis, P., and M. Roberts. 2016. *Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability*. South Asian Development Matters. Washington, DC: World Bank.
- Elsayed, A., and J. Wahba. 2019. "Political Change and Informality." *Economics of Transition and Institutional Change* 27 (1): 31-66.
- Estevão, M., and I. de Carvalho Filho. 2012. "Institutions, Informality, and Wage Flexibility: Evidence from Brazil." IMF Working Paper 12/84, International Monetary Fund, Washington, DC.
- Fajnzylber, P., W. Maloney, and G. Montes-Rojas. 2011. "Does Formality Improve Micro-Firm Performance? Evidence from the Brazilian SIMPLES Program." *Journal of Development Economics* 94 (2): 262-76.
- Farazi, S. 2014. "Informal Firms and Financial Inclusion: Status and Determinants." Policy Research Working Paper 6778, World Bank, Washington, DC.
- Fernández, C., and L. Villar. 2016. "Informality and Inclusive Growth in Latin America: The Case of Colombia." IDS Working Paper 469, Institute of Development Studies, Brighton, U.K.
- Fialová, K., and O. Schneider. 2011. "Labor Institutions and Their Impact on Shadow Economies in Europe." Policy Research Working Paper 5913, World Bank, Washington, DC.
- FICCI (Federation of Indian Chambers of Commerce and Industry). 2017. *Informal Economy in India: Setting the Framework for Formalisation*. Edited by J. Vij, A. Khanna, and P. Srivastava. New Delhi: Konrad-Adenauer-Stiftung.
- Fiess, N., M. Fugazza, and W. Maloney. 2008. "Informality and Macroeconomic Fluctuations." IZA Discussion Paper 3519, Institute for the Study of Labor, Bonn.
- Fox, L., and T. P. Sohnesen. 2012. "Household Enterprises in Sub-Saharan Africa: Why They Matter for Growth, Jobs, and Livelihoods." Policy Research Working Paper 6184, World Bank, Washington, DC.
- Friedman, E., S. Johnson, D. Kaufmann, and P. Zoido-Lobaton. 2000. "Dodging the Grabbing Hand: The Determinants of Unofficial Activity in 69 Countries." *Journal of Public Economics* 76 (3): 459-93.

- Frost, J., L. Gambacorta, and H. S. Shin. 2020. "From Financial Innovation to Inclusion." *Finance & Development* (March).
- Gagnon J., T. Xenogiani, and C. Xing, 2011. "Are All Migrants Really Worse Off in Urban Labour Markets? New Empirical Evidence from China." IZA Discussion Paper 6268, Institute for the Study of Labor, Bonn.
- Galal, A. 2005. "The Economic of Formalization: Potential Winners and Losers from Formalization in Egypt." In *Investment Climate, Growth, and Poverty*, edited by G. Kochendorfer-Lucius and B. Pleskovic. Washington, DC: World Bank.
- Gandelman, N., and A. Rasteletti. 2016. "The Impact of Bank Credit on Employment Formality: Evidence from Uruguay." *Emerging Markets Finance and Trade* 52 (7): 1661-78.
- Gatti, R., D. F. Angel-Urdinola, J. Silva, and A. Bodor. 2014. *Striving for Better Jobs: The Challenge of Informality in the Middle East and North Africa*. Washington, DC: The World Bank.
- Ghani, E., and R. Kanbur. 2013. "Urbanization and (In)Formalization." Policy Research Working Paper 6374, World Bank, Washington, DC.
- Ghani, E., W. Kerr, and S. O'Connell. 2013. "The Exceptional Persistence of India's Unorganized Sector." Policy Research Paper 6454, World Bank, Washington, DC.
- Goldar, B., and S. C. Aggarwal. 2012. "Informalization of Industrial Labor in India: Effects of Labor Market Rigidities and Import Competition." *The Developing Economies* 50 (2): 141-69.
- Goldberg, P., and N. Pavcnik. 2003. "The Response of the Formal Sector to Trade Liberalization." *Journal of Development Economics* 72 (2): 463-96.
- Grigorian, D. A., and H. R. Davoodi. 2007. "Tax Potential vs. Tax Effort: A Cross-Country Analysis of Armenia's Stubbornly Low Tax Collection." IMF Working Paper 07/106, International Monetary Fund, Washington, DC.
- Grimm, M., P. Knorringa, and J. Lay. 2012. "Constrained Gazelles: High Potential in West Africa's Informal Economy." *World Development* 40 (7): 1352-68.
- Guariglia, A., and B.-Y. Kim. 2006. "The Dynamics of Moonlighting in Russia: What is Happening in the Russian Informal Economy?" *Economics of Transition* 14 (1): 1-45.
- Gunatilaka, R. 2008. "Informal Employment in Sri Lanka: Nature, Probability of Employment, and Determinants of Wages." ILO Asia-Pacific Working Paper Series, International Labour Organization, New Delhi.
- Gupta, S., M. Keen, A. Shah, and G. Verdier. 2017. *Digital Revolutions in Public Finance*. Washington, DC: International Monetary Fund.
- Heintz, J., and I. Valodia. 2008. "Informality in Africa: A Review." WIEGO Working Paper 3, Women in Informal Employment: Globalizing and Organizing, Cambridge, MA.
- Huang, P. 2009. "China's Neglected Informal Economy. Reality and Theory." *Modern China* 35 (4): 405-38.
- Ianchovichina, E., and M. Ivanic. 2014. "Economic Effects of the Syrian War and the Spread of the Islamic State on the Levant." Policy Research Working Paper 7135, World Bank, Washington, DC.

- IFC (International Finance Corporation). 2007. *Designing a Tax System for Micro and Small Businesses: Guide for Practitioners*. Washington, DC: World Bank.
- ILO (International Labour Organization). 2009. *The Informal Economy in Africa: Promoting Transition to Formality: Challenges and Strategies*. Geneva: International Labour Office.
- ILO (International Labour Organization). 2018. *Women and Men in the Informal Economy: A Statistical Picture*. Geneva: International Labour Office.
- ILO (International Labour Organization). 2020. *ILO Monitor: COVID-19 and the World of Work*. Third edition. Geneva: International Labour Organization.
- Ilzetzki, E., and D. Lagakos. 2017. "The Macroeconomic Benefits of Tax Enforcement in Pakistan." International Growth Centre, London School of Economics.
- Imai, S., and S. Azam. 2012. "Does Microfinance Reduce Poverty in Bangladesh? New Evidence from Household Panel Data." *The Journal of Development Studies* 48 (5): 633-53.
- IMF (International Monetary Fund). 2018. "Public Wage Bill in the Middle East and Central Asia Region." IMF Departmental Paper, International Monetary Fund, Washington, DC.
- Ivlevs, A. 2016. "Remittances and Informal Work." *International Journal of Manpower* 37 (7): 1172-90.
- Johnson, S., D. Kaufmann, J. McMillan, and C. Woodruff. 2000. "Why do Firms Hide? Bribes and Unofficial Activity After Communism." *Journal of Public Economics* 76 (3): 495-520.
- Johnson, S., D. Kaufmann, and A. Shleifer. 1997. "The Unofficial Economy in Transition." *Brookings Papers on Economic Activity* 1997 (2): 159-239.
- Judy, L., and B. G. U. Gadgil. 2017. *East Asia and Pacific Cities: Expanding Opportunities for the Urban Poor*. Washington, DC: World Bank.
- Junquera-Varela R. F., M. Verhoeven, G. P. Shukla, B. Haven, R. Awasthi, and B. Moreno-Dodson. 2017. *Strengthening Domestic Resource Mobilization: Moving from Theory to Practice in Low- and Middle-Income Countries*. Washington, DC: World Bank.
- Jutting, J., and T. Xenogiani. 2007. "Informal Employment and Internal Migration: The Case of China." OECD Publishing, Paris.
- Kabir, M., and D. Parajuli. 2016. "When Urbanization is Messy, Students Fall Through the Cracks." *End Poverty in South Asia* (blog), February 10, 2016. <https://blogs.worldbank.org/endpointpoverty/insouthasia/when-urbanization-messy-students-fall-through-cracks>.
- Kaplan, D. S., E. Piedra, and E. Seira. 2011. "Entry Regulation and Business Start-Ups: Evidence from Mexico." *Journal of Public Economics* 95 (11-12): 1501-15.
- Kaufmann, D., and A. Kaliberda. 1996. "Integrating the Unofficial Economy into the Dynamics of Post-Socialist Economies: A Framework of Analysis and Evidence." Policy Research Working Paper 1691, World Bank, Washington, DC.
- Kesar, S., R. Abraham, R. Lahoti, P. Nath, and A. Basole. 2021. "Pandemic, Informality, and Vulnerability: Impact of COVID-19 on Livelihoods in India." *Canadian Journal of Development Studies/Revue Canadienne D'Etudes du Développement*: 1-20. <https://doi.org/10.1080/02255189.2021.1890003>.

- Kessides, C. 2005. "The Urban Transition in Sub-Saharan Africa: Implications for Economic Growth and Poverty Reduction." Africa Region Working Paper 97, World Bank, Washington, DC.
- Khera, P. 2016. "Macroeconomic Impacts of Gender Inequality and Informality in India." IMF Working Paper 16/16, International Monetary Fund, Washington, DC.
- Koettl, J., and M. Weber. 2012. "Does Formal Work Pay? The Role of Labor Taxation and Social Benefit Design in the New EU Member States." *Research in Labor Economics* 34 (April): 167-204.
- La Porta, R., and A. Shleifer. 2014. "Informality and Development." *Journal of Economic Perspectives* 28 (3): 109-26.
- La Porta, R., and A. Shleifer. 2016. "The Unofficial Economy in Africa." In *African Successes, Volume 1: Government and Institutions*, edited by Edwards, S., S. Johnson, and D. N. Weil. Chicago: University of Chicago Press.
- Lehmann, H., and A. Muravyev. 2009. "How Important are Labor Market Institutions for Labor Market Performance in Transition Countries?" IZA Discussion Paper 4673, The Institute for the Study of Labor, Bonn, Germany.
- Lehmann, H., and P. Norberto. 2018. "Informal Employment Relationships and the Labor Market: Is There Segmentation in Ukraine?" *Journal of Comparative Economics* 46 (3): 838-57.
- Lince, S. 2011. "The Informal Sector in Jinja, Uganda: Implications of Formalization and Regulation." *African Studies Review* 54 (2): 73-93.
- Loayza, N. 1997. "The Economics of the Informal Sector: A Simple Model and Some Empirical Evidence from Latin America." Policy Research Working Paper 1727, World Bank, Washington, DC.
- Loayza, N. 2016. "Informality in the Process of Development and Growth." *The World Economy* 39 (12): 1856-916.
- Loayza, N. 2018. "Informality: Why Is It So Widespread and How Can It Be Reduced?" *Research & Policy Brief*, World Bank, Kuala Lumpur.
- Loayza, N., L. Servén, and N. Sugawara. 2010. "Informality in Latin America and the Caribbean." In *Business Regulation and Economic Performance*, edited by N. Loayza and L. Servén, 157-96. Washington, DC: World Bank.
- Loayza, N., and T. Wada. 2010. "Informal Labor: Basic Measures and Determinants." Mimeo, World Bank, Washington, DC.
- Lukonga, L. 2018. "Fintech, Inclusive Growth and Cyber Risks: Focus on the MNAP and CCA Regions." IMF Working Paper 18/201, International Monetary Fund, Washington, DC.
- Maloney, W., and T. Taskin. 2020. "Determinants of Social Distancing and Economic Activity during COVID-19: A Global View." Working Paper 9242, World Bank, Washington, DC.
- Maurizio, R. 2015. "Transitions to Formality and Declining Inequality." *Development and Change* 46 (5): 1047-79.
- Mbaye, A. A., and N. Benjamin. 2015. "Informality, Growth, and Development in Africa." In *The Oxford Handbook of Africa and Economics*, edited by C. Monga and J. Y. Lin. New York: Oxford University Press.
- McMillan, M., D. Rodrik, and C. Sepúlveda. 2017. *Structural Change, Fundamentals, and Growth: A Framework and Case Studies*. Washington, DC: International Food Policy Research Institute.

- Meghir, C., R. Narita, and J.-M. Robin. 2015. "Wages and Informality in Developing Countries." *American Economic Review* 105 (4): 1509-46.
- Menezes-Filho, N. A., and M.-A. Muendler. 2011. "Labor Reallocation in Response to Trade Reform." NBER Working Paper 17372, National Bureau for Economic Research, Cambridge, MA.
- Monteiro, J. C. M., and J. J. Assunção. 2012. "Coming Out of the Shadows? Estimating the Impact of Bureaucracy Simplification and Tax Cut on Formality in Brazilian Microenterprises." *Journal of Development Economics* 99 (1): 100-15.
- Nguimkeu, P. 2014. "A Structural Econometric Analysis of the Informal Sector Heterogeneity." *Journal of Development Economics* 107 (March): 175-91.
- Nguimkeu, P., and C. Okou. 2019. "Informality." In *The Future of Work in Africa: Harnessing the Potential of Digital Technologies for All*, edited by J. Choi, M. A. Dutz, and Z. Usman, 107-139. Washington, DC: World Bank.
- Nguimkeu, P., and C. Okou. 2020. "A Tale of Africa Today: Balancing Lives and Livelihoods of Informal Workers during the COVID-19 Pandemic." Africa Knowledge in Time Policy Brief, World Bank, Washington, DC.
- Nguimkeu, P., and C. Okou. 2021. "Does Informality Increase the Spread of COVID-19 in Africa? A Cross-Country Examination." *Applied Economics Letters*.
- OECD (Organisation for Economic Co-operation and Development). 2009. *Is Informal Normal? Towards More and Better Jobs in Developing Countries*. Paris: OECD Publishing.
- OECD (Organisation for Economic Co-operation and Development). 2019. *Society at a Glance: Asia Pacific 2019*. Paris: OECD .
- Oosthuizen, M., K. Lilenstein, F. Steenkamp, and A. Cassim. 2016. "Informality and Inclusive Growth in Sub-Saharan Africa." ELLA Regional Evidence Paper, ELLA Network, Lima.
- Ordóñez, J. C. L. 2014. "Tax Collection, the Informal Sector, and Productivity." *Review of Economic Dynamics* 17 (2): 262-86.
- Packard, T., J. Koertl, and C. E. Montenegro. 2012. *In from the Shadow: Integrating Europe's Informal Labor*. Washington, DC: World Bank.
- Parajuli, R. 2014. "Determinants of Informal Employment and Wage Differential in Nepal." *The Journal of Development and Administrative Studies* 22 (1-2): 37-50.
- Park, A., Y. Wu, and Y. Du. 2012. "Informal Employment in Urban China: Measurement and Implications." World Bank, Washington, DC.
- Perry, G., W. Maloney, O. Arias, P. Fajnzylber, A. Mason, and J. Saavedra-Chanduvi. 2007. *Informality: Exit and Exclusion*. Washington, DC: World Bank.
- Ponczek, V., and G. Ulyseia. 2018. "Enforcement of Labor Regulation and the Labor Market Effects of Trade: Evidence from Brazil." Discussion Paper DP15960, Centre for Economic Policy Research, London.
- Rodrik, D. 2015. "Premature Deindustrialisation." NBER Working Paper 20935, National Bureau of Economic Research, Cambridge, MA.
- Rothenberg, A. D., A. Gaduh, N. E. Burger, C. Chazali, I. Tjandraningsih, R. Radikun, C. Sutera, and

- S. Weilant. 2016. "Rethinking Indonesia's Informal Sector." *World Development* 80 (April): 96-113.
- Shapiro, A. F., and F. S. Mandelman. 2016. "Remittances, Entrepreneurship, and Employment Dynamics over the Business Cycle." *Journal of International Economics* 103 (November): 184-99.
- Shehu, E., and B. Nilsson. 2014. *Informal Employment among Youth: Evidence from 20 School-to-work Transition Surveys*. Geneva: International Labour Organization.
- Slonimczyk, F. 2012. "The Effect of Taxation on Informal Employment: Evidence from the Russian Flat Tax Reform." In *Informal Employment in Emerging and Transition Economies*, edited by H. Lehmann and K. Tatsiramos. Bingley, England: Emerald Group Publishing Limited.
- Sonobe, T., J. E. Akoten, and K. Otsuka. 2011. "The Growth Process of Informal Enterprises in Sub-Saharan Africa: A Case Study of a Metalworking Cluster in Nairobi." *Small Business Economics* 36 (3): 323-35.
- Staneva, A. V., and G. R. Arabsheibani. 2014. "Is There an Informal Employment Wage Premium? Evidence from Tajikistan." *IZA Journal of Labor and Development* 3 (1): 1-24.
- Steel, W., and D. Snodgrass. 2008. "Raising Productivity and Reducing Risks of Household Enterprises." Diagnostic Methodology Framework, World Bank, Washington, DC.
- Straub, S. 2005. "Informal Sector: The Credit Market Channel." *Journal of Development Economics* 78 (2): 299-321.
- Taymaz, E. 2009. "Informality and Productivity: Productivity Differentials between Formal and Informal Firms in Turkey." ERC Working Paper 0901, Economic Research Centre, Middle East Technical University, Ankara, Turkey.
- Végh, C., and G. Vuletin. 2015. "How Is Tax Policy Conducted over the Business Cycle?" *American Economic Journal* 7 (3): 327-70.
- Verme, P., C. Gigliarano, C. Wieser, K. Hedlund, M. Petzoldt, and M. Santacroce. 2016. *The Welfare of Syrian Refugees: Evidence from Jordan and Lebanon*. Washington, DC: World Bank.
- Verner, D., and M. Verner. 2005. "Economic Impacts of Professional Training in the Informal Sector of Côte d'Ivoire: Evaluation of the PAFPA." Policy Research Working Paper 3668, World Bank, Washington, DC.
- Vuletin, G. 2008. "Measuring the Informal Economy in Latin America and the Caribbean." IMF Working Paper 08/102, International Monetary Fund, Washington, DC.
- Waseem, M. 2018. "Taxes, Informality and Income Shifting: Evidence from a Recent Pakistani Tax Reform." *Journal of Public Economics* 157 (January): 41-77.
- Williams, C., and J. Padmore. 2013. "Envelope Wages in the European Union." *International Labour Review* 152 (3-4): 411-30.
- Williams, C., M. Shahid, and A. Martinez. 2016. "Determinants of the Level of Informality in Informal Micro-Enterprises: Some Evidence from the City of Lahore, Pakistan." *World Development* 84 (August): 312-25.
- World Bank. 2004. *Unlocking the Employment Potential in the Middle East and North Africa*. MNA Development Report. Washington, DC: The World Bank.
- World Bank. 2011. "The Scope and Main Characteristics of Informal Employment in Ukraine." Technical Note for the Government of Ukraine, World Bank, Washington, DC.

- World Bank. 2014. *East Asia Pacific at Work: Employment, Enterprise, and Well-being*. Washington, DC: World Bank.
- World Bank. 2015. *East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth*. Washington, DC: World Bank.
- World Bank. 2016. *What's Holding Back the Private Sector in MNA? Lessons from the Enterprise Survey*. Washington, DC: World Bank.
- World Bank. 2017. "The Economics of Post-Conflict Reconstruction in MNA." *Middle East and North Africa Economic Monitor*. Washington, DC: World Bank.
- World Bank. 2018a. *Gulf Economic Monitor: Deepening Reforms; In Focus: Pension Systems in the Gulf*. February. Washington, DC: World Bank.
- World Bank. 2018b. *Middle East and North Africa Economic Monitor: A New Economy for Middle East and North Africa*. October. Washington, DC: World Bank.
- World Bank. 2019a. *World Development Report 2019: The Changing Nature of Work*. Washington, DC: World Bank.
- World Bank. 2019b. *Global Economic Prospects: Darkening Skies*. January. Washington, DC: World Bank.
- World Bank. 2020a. *Europe and Central Asia Economic Update: East Asia and Pacific in the Time of COVID-19*. Fall. Washington, DC: World Bank.
- World Bank. 2020b. "Phase II: COVID-19 Crisis through a Migration Lens." Migration and Development Brief 33, World Bank, Washington, DC.
- World Bank. 2020c. *Europe and Central Asia Economic Update: COVID-19 and Human Capital*. Fall. Washington, DC: World Bank.
- World Bank. 2020d. *South Asia Economic Focus: Beaten or Broken? Informality and COVID-19*. Washington, DC: World Bank.
- World Bank. 2020e. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures." Living paper version 14 (December 11, 2020). World Bank, Washington DC.
- World Bank. 2021. *Africa's Pulse: COVID-19 and the Future of Work in Africa*. April. Washington, DC: World Bank.
- World Bank and DRCSC (Development Research Center of the State Council, the People's Republic of China). 2014. *Urban China: Toward Efficient, Inclusive, and Sustainable Urbanization*. Washington, DC: World Bank.
- World Economic Forum. 2018. *The Global Competitiveness Report 2018*. Geneva: World Economic Forum.
- Xaba, J., P. Horn, and S. Motala. 2002. "The Informal Sector in Sub-Saharan Africa." ILO Working Paper on the Informal Economy 2002/10, International Labour Organization, Geneva.
- Zahariev, A. 2003. "Tax Avoidance in Bulgaria: The Human Capital Approach." *SSRN Electronic Journal* (5).