CHAPTER 1

The Informal Sector: What Is It, Why Do We Care, and How Do We Measure It?

SUMMARY: *This chapter seeks to unpack our understanding of the term* informality, *why we may care about it, and what dynamics may be driving its elements. The number of phenomena it encompasses and the limitations of its measures are manifold, dictating caution in employing the term. Yet two stylized facts remain: First, however measured, informality is high in Latin America, although not obviously so for the region's level of development; and it remains an important phenomenon. Second, in several countries it has experienced striking increases over the last decades. Whatever adverse regulatory, poverty, growth, or social morale implications "informality" may have, they have become more relevant with time.*

Introduction: What is informality?

The term *informality* means different things to different people, but almost always bad things: unprotected workers, excessive regulation, low productivity, unfair competition, evasion of the rule of law, underpayment or nonpayment of taxes, and work "underground" or in the shadows.[1] The multiplicity of adjectives from very distinct fields of study suggests that we may have a classic "blind men and the elephant problem"—everybody touches part of the animal, but understands only the part that they touch. More likely still, we are exploring several distinct phenomena as we attempt to describe one ungainly composite "informality." To further complicate things, Keith Hart, the purported coiner of the term *informality* (and one who did not think the sector was necessarily bad), argued that the source of our blindness—the undocumented nature of the sector— left the sector especially vulnerable to being a *tabula rasa* on which analysts projected their particular concerns:

> Most enterprises run with some measure of bureaucracy are amenable to enumeration by surveys, and, as such, constitute the "modern sector" of the economy. The remainder—that is, those who escape enumeration—are variously classified as the "low-*productivity* urban sector," the "reserve army of the *underemployed and unemployed,*"

the "urban *traditional* sector," and so on. These terms beggar analysis by assuming what has to be demonstrated (Hart 1973, p. 68).

With this, Hart cautions us against inquiry with excessively well-informed ideas of what we may find.

Fortunately, the accumulation of rich data sets over the last decades has cast progressively more light on the realm of the informal, permitting us to document the great heterogeneity of actors and their *razón de ser*. Among them we find the following:

Labor:
- workers, particularly the old and young, who would prefer a job with standard labor protections, but are unable to get one;
- workers who have quit formal sector jobs to start a microbusiness to be their own boss, make more money, and avoid paying social protection taxes; and women leaving formal salaried jobs for the flexibility of balancing home and income-raising responsibilities.

Microfirms:
- microentrepreneurs with no intention of or potential for growing, and hence no intention of engaging the institutions of civil society;

- microentrepreneurs stymied in their expansion by excessively high barriers to registering with the government and thereby accessing other inputs offered by the informal sector.

Firms:

- firms and individuals avoiding taxation or other mandated regulations because everybody else does, and because enforcement is weak and uneven;
- firms registering only part of their workers and part of their sales—or declaring only part of the salary of their workers—due to an excessive regulatory burden.

Though far from exhaustive, these three pairs are illustrative of the variety of types of agents captured under the rubric of "informality" and, further, capture three different margins of informality discussed later. They also suggest the reasons we care about informality.

Why do we care about informality?

Each example above has a different underlying logic and reason for being and, hence, a reason that we may care about its existence or size from a policy perspective.

Unprotected families

As the regional flagship report *Securing Our Future* (de Ferranti et al. 2000) noted, while development is often seen as a process of increasing income, in practice we have also seen the emergence of institutions to shelter families from adverse shocks, be they loss of job, illness, or natural calamity. The presence of a large fraction of the workforce in Latin America that does not count on formal mechanisms to hedge or mitigate these shocks is, hence, of intrinsic concern. What complicates policy making is that, as the chapters in this volume will show, workers often choose jobs that lack such benefits or they willingly leave jobs that offered such benefits, valuing more other characteristics of informal jobs. In this case, the worker and his/her family must be at least as well-off as before, but may still be vulnerable to some types of misfortune (in particular, health) for which informal protections are few. There also may be externalities for society in, for instance, the classic case of families undersaving for retirement. Further, if, as is suggested throughout this report, some informality is due to the low valuation of government-provided services compared with their implicit or explicit costs to workers, then a choice to be unprotected may point to a dysfunctional and inefficient social protection system.

Drag on productivity and growth

Rigidities in either the labor or product market that prevent the optimal allocation of workers among sectors generally lead to output and welfare losses. Regulatory failures that lead to higher informality may have a direct impact on productivity. But beyond this, informality itself has been postulated to have adverse impacts on productivity. As noted in *Poverty Reduction and Growth: Virtuous and Vicious Circles* (Perry et al. 2006), workers uninsured against health, old age, and other risks may have lower productivity and fewer incentives to invest in human capital accumulation. Firms unable to access credit, larger sales/product markets, and sources of innovation, and those evading taxes may operate at a suboptimal scale. Competition with noncomplying firms leads to productivity losses at formal firms. At the aggregate level, a large concentration of workers in small firms rather than larger firms may lead to lower productivity growth.

Erosion of the functioning and legitimacy of market- and equity-enhancing institutions

Noncompliance with tax collection and market-supporting regulation erodes the rule of law and the integrity of public institutions, and limits society's ability to address collective needs that range from infrastructure to the mitigation of inequality. Noncompliance may become a social norm that increases the costs of enforcing the law, undermines the legitimacy of societal institutions, and creates horizontal and vertical inequities (with better-off insiders and worse-off outsiders). This said, compliance with legal norms may be endogenous to the perceptions of the current effectiveness of public institutions and, more profoundly, to the nature of the underlying "social contract."

Indicators of other problems

A sizable body of literature sees informality as arising from poor regulation or other government failures. To the degree that this is the case, unusually high or increasing informality may be suggestive of poor policy regimes.

Informality and the relationship between the individual and the state

Implicit in each of the examples above is a relationship between the individual or firm and the state. Economic theory posits a legitimate role of the state in a number of areas. The state redresses coordination failures in the provision of public goods (for example, roads, defense, public

security) and in the prevention of social bads (such as pollution). Further, it fills in missing markets—establishing courts, property rights, risk-pooling mechanisms—and sets the rules in the modern economy. Finally, it concerns itself with distributional issues and power asymmetries—redistributing from rich to poor, ensuring that labor–capital relationships are not too one-sided or that no firm or group of firms gains too much economic power, and that all citizens receive equal treatment regarding the provision of key services. To redress the market failures identified above, the state necessarily requires the power to monitor and coerce agents to do things that, privately, they would not do. This view of the state has led to seeing the informal sector through a lens emphasizing lack of compliance with legal norms. Though this is not the only lens (Hart defines informality simply as "undocumented," an important dimension taken up in chapter 8), it enjoys currency, particularly in the economics field, and will be a central organizing theme of this report.

However, even that fairly narrow definition raises the question of why agents are not in compliance with state norms. Among the many lenses through which this question has been viewed, one of the most influential lenses on the labor and firm side has focused on their exclusion from critical state benefits and, concomitantly, the circuits of the modern economy. However, this report highlights a second lens through which to view informality that is more akin to Hirschman's (1970) "exit": many workers, firms, and families choose their optimal levels of engagement with the mandates and institutions of the state on the basis of their valuation of the net benefits associated with formality and the enforcement effort and capability of the state. That is, they make implicit cost–benefit analyses about whether to cross the relevant margin into formality and frequently decide against it. Under this view, high informality results from a massive opting out of formal institutions by firms and individuals, and offers an indictment of the state's regulations and services and of its enforcement capability.

As a starting point, it is useful to sketch three types of relationships between the individual and the state and, more generally, the institutions of civil society, that capture these two dimensions.

Opportunistic evasion

In the case closest to economic theory's vision of the state, the informal sector is seen as *evading* legal norms that give rise to additional adjectives: *tax-evading* by those focusing

on lack of compliance with revenue-raising norms, *illegal* when the sector engages in unsanctioned activities, *unfairly competitive* by those focusing on how industrial structure is affected by such evasion (Capp, Elstrodt, and Jones 2005), *unprotected* by those thinking about why workers in least-developed countries (LDCs) are not covered by labor legislation (International Labour Organization [ILO]), and *subcontracted* by those concerned with the potentially exploitative dynamics of globalization (Castells and Portes 1989). Each of those descriptors can be seen as evasion, broadly construed, of the state's legitimate and efficiently executed brief.[2] Opportunistic evasion is, of course, the primal form of "opting out," despite the fact that "voice" through the political system may be perfectly adequate.

Many of the cases above have an exclusionary complement. Those firms avoiding labor legislation, for instance, may be implicitly creating a dual labor market where their employees would prefer to enjoy the full benefits of the social protection system, but find themselves, for at least the present, in inferior jobs.

Defensive evasion and exclusion: Coping with the imperfect, captured, or informal state

However, as a large body of literature has documented, the state often deviates from the economists' ideal. Simply put, the state does its job badly—ranging from poor regulation to oppressive or exclusionary measures, forcing agents, who perhaps are inclined toward compliance under the ideal state, to cope by defensive evasion. De Soto (1989), Djankov et al. (2002), Friedman et al. (2000), Loayza, Servén, and Oviedo (2005), and Schneider (2005), among many others, have stressed the very high registration costs, the regulatory burden to becoming formal, as well as the high ongoing costs of fully integrating with the state that drive firms to stay off the state's radar.

The postulated reasons for this state deviation from the ideal range widely both in view of the nature of the state and in implications for policy. A large body of literature stresses that the bureaucracy may be populated by rent seekers and, in principle, defensive evasion in this case could be largely alleviated by regulatory reform. However, in more extreme views (Acemoglu, Johnson, and Robinson 2001; North, Wallis, and Weingast 2005), the state is behaving in a deliberately and coherently *exclusionary* manner, manifesting an underlying stable political-economy equilibrium where incumbent business and labor elites defend their rents and will find ways to offset and nullify any tinkering

with the costs of doing business. In this spirit, the informal firm, as depicted by de Soto (1989), is excluded from the benefits of the state and hobbled in its participation in the market economy; the informal worker is excluded from the benefits enjoyed by a privileged caste of workers. Further, in the absence of a major shock to the political-economy equilibrium, they are permanently so.

Other, more generous views, (for example, Centeno and Portes 2003) see weak Latin American states as assigning themselves an unmanageable—and usually unenforceable—load of regulatory measures. That is, what we see is less a conspiracy to exclude than overwhelmed and poorly coordinated bureaucracies. However, the exclusionary views do touch on a leitmotif in the political science literature that stresses the informality of Latin American *political systems.* In particular, this literature studies the divergence between the formal structures of democracy and the economists' ideal bureaucracy, on one hand, and how governance is really done, on the other. O'Donnell (1996) argues that often behind formal elections and alternation of power lies particularistic access to the state with roots in century-old traditions of patron–client relations. Everyone "understands the model" of particularistic access, distrust of the state and its evenhandedness is high, tax morale[3] and the general feeling of social reciprocity are low. Further, as chapter 7 will discuss, the state is perceived as providing little: relatively few citizens are covered by what has been called the *truncated welfare state*—low quality and coverage of public social services, such as health care or education, further erode tax morale and prompt opting out of the system of taxes and transfers. Hence, a Latin American citizen weighing working with a state that diverges substantially from the ideal, or employing other "nonformal" ways of solving social problems and market failures, may not perceive the informal-formal dichotomy as quite so sharp.

At a meta level, it may be argued that the underperformance of Latin American states along these dimensions partly reveals poorly resolved social tensions and manifests what we might use as conceptual shorthand—a dysfunctional underlying "social contract." Beyond high informality, this can also be seen in the inability of the state to redress the long-standing high inequality, in the weak rule of law, or in the recurrent bouts of macroeconomic instability. Difficult as these phenomena have been to manage in the region, the report is generally optimistic about the possibilities of improving the quality of the state and the

design of its policies and, hence, substantially reducing the distortions that both exclude and encourage exit.

Passive evasion and state irrelevance

This discussion of the limits of the Latin American state brings us back to Hart's (1973) emphasis on how multiple institutional systems coexist within a polity and that the state is only one candidate among many. This may particularly be the case for very rudimentary microenterprises that may not consider themselves part of the modern economy/social order, and whose production requires little in the way of services from the largely irrelevant state. Such firms are described colorfully in Geertz's (1963) seminal *Peddlers and Princes,* which traces the social evolution from the bazaar economy in Indonesia to that of the more rational, modern "firm." The premodern or bazaar economy encompasses a vast number of proto-firms that are not constrained by access to the benefits that normally are associated with formality but, as Hart stresses, operate within subsystems of institutions that coexist with, substitute for, or compete with the "formal" state institutions. In fact, what is striking in Geertz's description of two Indonesian towns is the significant discussion of institutions for managing credit, risk, and collective issues of irrigation, but very little about the state.

Here we find a conceptual kinship with the literature on social capital that deals with "informal" relations of trust, reciprocity, and the like that exist in the absence of formal institutions (see Alesina and La Ferrara 2000; Glaeser, Laibson, and Sacerdote 2000; Greif 1993, 1998; and Stiglitz 2000, among others). While, generally, such relations are considered positively—that is, as ways of solving problems of contracting and market failure—they may, in addition, be preferable in some dimensions to formal institutions that may eventually displace them. Local institutions are likely to be more closely tailored to the relevant market failure and less subject to moral hazard due to closer monitoring by family or village. As Bentolila and Ichino (2000) argue, the informal safety nets in southern Europe cushion families against employment shocks better than the formal unemployment insurance schemes of northern Europe. Studying financing in Chicago migrant communities, Bond and Townsend (1996) conclude, "We are inclined to view the small role played by the formal sector as stemming, at least in part, from community disinterest as opposed to formal sector negligence" (p. 24) due to the insufficient flexibility of formal institutions. With some caution, they suggest that
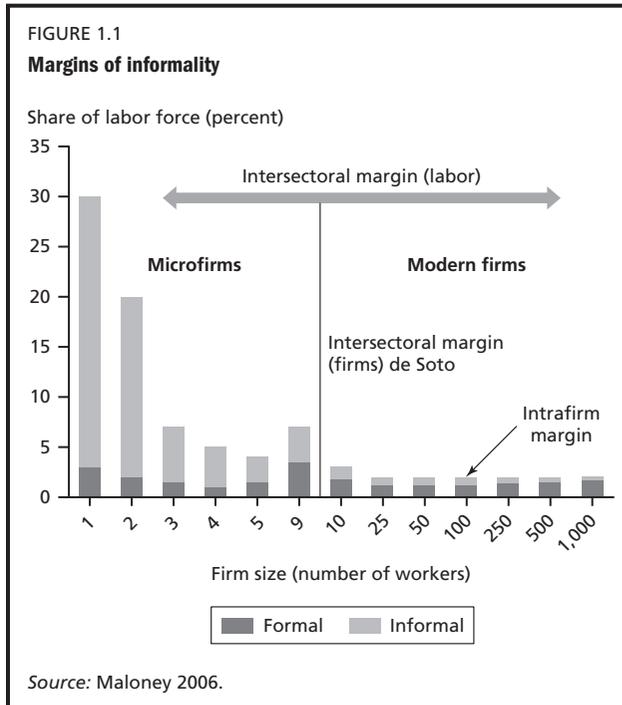
"formal sector institutions attempt to create more flexible financial instruments by either using or mimicking existing informal and semi-formal structures" (p. 24). In sum, informal institutions cannot be ruled out ex ante as suboptimal, given the type of enterprises operating within them and the level of development of the state.

The demand for formal institutions increases with the sophistication of the firm and, more generally, of society. Geertz's peddlers become organized firms whose growth will require access to an increasingly sophisticated set of socially provided inputs. In line with de Soto's anecdote of the Peruvian street vendors who sought to pay taxes so they would be granted de facto property rights over their pitches, participation in formal institutions can be seen as a "normal" input, increasing with firm size or sophistication (see Levenson and Maloney 1998). This is entirely consistent with the logic, postulated in the social capital literature, that individuals optimize their investment in informal networks with a view toward long-run returns, except that here the "networks" include formal institutions.

At the economywide level, the reach and density of formal institutions are almost certainly endogenous to the complexity of the society, and, as Stiglitz (2000) suggests, we may expect a greater need and density for formal institutions with development—a natural evolution from informal to more formal institutions.[4] At each point along the course of this process, the state makes its own cost–benefit analysis on what size firm is worth monitoring and taxing to finance its mandate, and what size is not worth doing so, thus leaving the institutional space free for the kind of institutions discussed above. Tendler (2002), in fact, describes a "devil's deal" in Brazil between the state and the informal sector implicitly on the boundaries of this space. More generally, there is an equilibrium where small firms find nonstate solutions to their needs, and the state occupies itself with firms above its enforcement threshold. In this view, informality is neither cause nor result of underdevelopment, nor is it necessarily pathological; rather it is a normal phase in the development process—a lack of formalization of enterprises and the dominance of local institutional systems that complement, compete with, or substitute for those of the state. It is not so much "exiting" as never really "entering."

Three margins of informality

In all likelihood, all these agent–state interactions can be found among the phenomena lumped under what is clearly a very heterogeneous informal sector (see Cunningham

FIGURE 1.1
Margins of informality

Share of labor force (percent)

Firm size (number of workers)

Source: Maloney 2006.

and Maloney 2001; Fields 1990; and Henley, Arabsheibani, and Carneiro 2006). But policy demands that we identify the most germane interactions, and this, in turn, requires identifying the critical margins along which individuals and firms are making calculations about or facing constraints to becoming formal. Maloney (2006) sketches three such margins and suggest what types of agent–state interactions are at play (figure 1.1): (1) the *intrafirm margin* where firms are partly formal and partly not, (2) the *intersectoral margin* between informal and formal *firms,* and (3) the *intersectoral margin* of formal and informal *workers* operating through the labor market. These margins are not exhaustive, nor are they unrelated to each other. However, they do capture much of the relevant activity covered in the informality discourse and help us isolate the most relevant areas on which to focus.

The intrafirm margin

Firms across the size spectrum are often partially informal across several dimensions. Underreporting of sales is common globally. As chapter 6 will show, the investment climate surveys conducted by the World Bank find that the percentage of sales reported by Brazilian firms ranges between 60 percent in microfirms and 80 percent in very large firms. Survey and anecdotal evidence from Latin America suggests that medium-size to large firms will commonly have a substantial share of their operations, including workers, off the books. In Argentina, roughly

15 percent of workers will receive pay partly "*en blanco*" on the books and partly "*en negro*"–off the books–without the corresponding labor taxes paid by either worker or firm. As discussed later, firms can often be fully compliant in one dimension—perhaps paying taxes—and not in others—registering workers in social security.

The intersectoral margin (firms)

The growing informal firm is on the border of registering or complying with the labor or tax laws. To formalize the classic de Soto story, we can follow Lucas (1978) and think of steady-state firm size as determined by its underlying cost structure that reflects the ability of the entrepreneur, among other characteristics. The resulting heterogeneity of costs gives us the distribution of firms across the size spectrum, whether a mom-and-pop store or a Wal-Mart or Mexican Elektra. And, as Jovanovic (1982) argues, entrepreneurs have a rough idea of what their ability is, but only upon actually opening the business can they make that estimate precise. Some will find out they are unprofitable and quit; others will find their profits surprisingly high and seek to expand. At this point, the latter group may need the services of the state, or of collateral services that require being recognized by the state.

In the de Soto (1989) view, the costs of becoming formal are too high and firms are effectively excluded from the formal realm and forced to remain suboptimally small. Banerji and Jain (2006), following Rauch (1991), argue that lack of monitoring below a certain size threshold produces size dualism, where small firms take advantage of the wage differential, in the former case, to produce lower-quality goods for the poorer section of the consumption market.[5]

However, there are also firms whose underlying productivity is so low that they will never demand the services of the state. Going back to Geertz's (1963) study of the bazaar economy in Indonesia, he describes entrepreneurs who, in fact, lack the organizational skills to function as a modern firm, let alone grow to a large size. Very poorly educated workers, many less than a generation away from subsistence farming, would also, on average, have low ability levels in running a firm. Alternatively, women may choose to operate as independents to better balance home and income-earning roles, with no plans to expand (Cunningham 2001). Further, we do not know how unsubstitutable formal inputs are for less formal ones.

Hence, there are two central open questions surrounding this margin. First, how many informal firms are actually close to the margin of becoming formal? Alternatively put, how relevant is de Soto's story in explaining informality? Second, how binding are the impediments at this margin? Chapters 7 and 8 will take up both these questions.

The intersectoral margin (workers)

The labor literature has long focused on the relationship and flows between workers in the formal sector, covered by labor legislation, and those in the informal microfirm sector who are not covered. The latter are often considered the most disadvantaged of the urban labor market, as they are precarious, often termed *subsistence,* and thought to be the rump end of the global value chain. A large informal sector has also been seen as evidence of a labor market segmented by acute formal sector rigidities arising from excessively high minimum wages or union bargaining (see, for example, Esfahani and Salehi-Isfahani 1989; Mazumdar 1976; and Rauch 1991).

However, evidence has been mounting that a sizable share of entrants into the informal sector do so because they will become better-off. The report will use the term *voluntary* to denominate entry yielding higher or equal levels of welfare. This does not imply that they are not poor or that they are happy—only that this is the better of two options, given their lower human capital and the low productivity of the economy. Returning to Lucas (1978), we may argue that, in fact, at low levels of aggregate productivity, the opportunity cost of becoming self-employed is such that more workers with a comparative advantage in operating a small business will actually do so. This may explain an important part of self-employment and microentrepreneurship in many countries in the region. The idea that entry into informality occurs for various reasons is not new. Hart (1973) never saw the informal sector as intrinsically bad, and Fields (1990) noted that there is an "upper tier" to informal employment that does very well. The critical empirical question is, What share of the sector corresponds to those who would prefer formal jobs versus those who are as well-off as they would be in the formal sector? Gregory (1986) and Maloney (1999, 2004) argued that, for Mexico, the evidence of segmentation is weak, the majority of the sector is "voluntary," and the unprotected/exploited view of informality seems an inappropriate lens.[6] The next three chapters confirm this finding for Mexico and the Dominican Republic, as well as for the majority of the informal self-employed workforce across the region. They also reveal that, in most countries

BOX 1.1
The ILO definition of informality

The three margins discussed in the text are fully consistent and useful for analyzing informality, both as the ILO traditionally defined it, based on what might be called the "productivity view" (rows in the table below) that focused on the type of production unit (rows); and the newer focus on *informal employment* defined according to the "social protection" or "legalistic" view by job status (columns). In the former definition, the informal sector enterprises are defined as production units operated by single individuals or households that are not constituted as separate legal entities independent of their owners and in which capital accumulation and productivity are low. This includes "family units" (those operated by nonprofessional own-account workers with or without contributing family workers) and "microenterprises" (productive units with no more than five employees). As such, the table below shows that total employment in the informal sector includes self-employed (3); own-account workers, with or without family workers (5); microentrepreneurs (4); and their employees (6). Under this definition, understanding the logic of the production would have required focusing most on the second and third margins—how microfirms become formal and the nature of flows between those people working in such firms and those in the "modern" sector of the economy. The more recent shift to a "legal" definition of informality recognizes that "informal employment" can be found both within and outside the small-firm sector. Consequently, informal employment now includes informal contractual arrangement in firms that are otherwise formal, (1) and (2), and hence would now include the intrafirm margin.

ILO conceptual framework: informal employment

Production unit by type	Job by status in employment								
	Own-account workers		Employers		Contributing family workers	Employees		Members of producers' cooperatives	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal	Informal	Formal
Formal sector enterprises					1	2			
Informal sector enterprises[a]	3		4		5	6	7	8	
Households[b]	9					10			

Source: Hussmanns 2004.
Note: Cells shaded in dark gray refer to jobs, which, by definition, do not exist in the type of production unit in question. Cells shaded in light gray refer to formal jobs. Unshaded cells represent the various types of informal jobs.
Informal employment: cells 1–6 and 8–10. Employment in the informal sector: cells 3–8.
Informal employment outside the informal sector: cells 1, 2, 9, and 10.
a. As defined by the Fifteenth International Conference of Labour Statisticians 1993 (excluding households employing paid domestic workers).
b. Households producing goods exclusively for their own final use and households employing paid domestic workers.

of the region, informal salaried workers appear to correspond more to the traditional queuing view.

Framing the informality "decision" as one occurring across three distinct margins focuses the diagnostic and policy discussion on the relevant set of individuals and considerations, and is general enough to encompass most existing frameworks as well. For instance, the ILO definition of informality, both traditional and more recent (box 1.1), is fully compatible, with the latter spanning all three margins. Concerns with better enforcement of tax codes or "corruption," more generally, are likely to focus primarily on the first margin. The World Bank's Doing Business measures focus primarily on the second de Soto margin, as might those concerned with access to credit and informal microfirm productivity more generally. Traditional concerns with segmented labor markets focus primarily on the third margin.

Measuring the informal sector

The previous sections have suggested how difficult it may be to present a picture of informality, even if we had the data to see clearly the component elements—data that, almost by definition, we do not have. Which aspect are we interested in? Large firms evading taxes? Microfirms that will manage through family and community mechanisms and not bother with the state? Workers rationed out of formal jobs? Or women quitting jobs with benefits to stay with their children and work independently? This heterogeneity is clearly the manifestation of multiple social and economic phenomena that have given rise to a cacophony of characterizations and measurement attempts. The next sections discuss a subset of these measures, what they may or may not be capturing conceptually and in practice, and how they can foreshadow later discussions of the most relevant margins of informality on which policy makers should focus.

By definition, most economic activities that are classified as informal are not captured by national accounts and official statistics. One exception is informal employment, which can typically be measured or proxied using questions from household survey data on affiliation to social security, the mandated benefits workers receive, or the size of the firms they work for (in terms of the number of employees), or using a combination of those variables.

There are several methods that can be used to obtain estimates of the magnitude of the informal sector. These methods have been described in detail, and their strengths and weaknesses have been discussed extensively.[7] These can be separated into three classes: (1) direct methods, (2) indirect methods or "indicator" approaches, and (3) the model approach (figure 1.2).

Direct approaches to measurement

The direct methods are microeconomic in nature and use either voluntary survey data or the results from tax audits to construct estimates of total economic activity and its official and unofficial (or measured and unmeasured) components. Voluntary surveys typically ask respondents to declare or reveal their incomes, labor status, or impressions of levels of tax compliance in their industry. This method has been criticized for its sensitivity to how the questions are posed, and its confidence in the respondents' willingness to truthfully reveal their income. Tax audit-based measures define the magnitude of the informal economy as the

FIGURE 1.2
Methods for measuring the informal sector
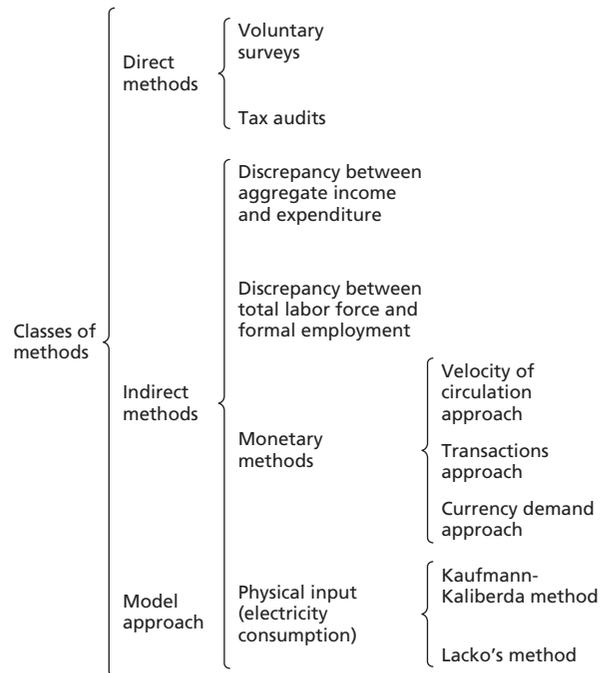
Source: García-Verdú 2007.

difference between the income declared in tax returns and the income actually found after an audit. A potential problem in extrapolating to the national economy is that audits are usually nonrandom and, hence, may not be representative. In both cases, the applications of these methods have been limited to a few developed countries because of the paucity of the available data.

For Latin America, we have three principal sources of data. One is the newly collected investment climate assessment that asks firms about the level of underreporting of income and workers. The World Bank Doing Business indicators use an analogous definition in their compilations. Figure 1.3 presents the unweighted average of these responses across firms in Latin America and the Caribbean and suggests a wide range of noncompliance, from less than 5 percent in Chile (similar to Organisation for Economic Co-operation and Development [OECD] levels) to over 40 percent in Panama.

Household and labor surveys provide the second and far more extensive source of direct data. The issue is finding the right definition of informality. As noted in box 1.1, the ILO has traditionally employed what might be called a

FIGURE 1.3

Selected measures of informality

a. Percent of sales not reported[1]

Panama
Nicaragua
Brazil
Honduras
Mexico
Costa Rica
El Salvador
Colombia
Guatemala
Latin America and the Caribbean
Ecuador
Paraguay
Bolivia
Uruguay
Argentina
Jamaica
Peru
Chile

0 10 20 30 40 50

b. Percent informal labor force (legalistic definition)[2]

Paraguay
Bolivia
Peru
Nicaragua
Ecuador
Guatemala
Mexico
Colombia
Latin America and the Caribbean
El Salvador
Argentina
Venezuela, R. B. de
Brazil
Uruguay
Chile

10 20 30 40 50 60 70 80

c. Percent informal labor force: Productive definition (% employed)[3]

Bolivia
Paraguay
Colombia
Peru
Guatemala
Ecuador
Nicaragua
Honduras
Latin America and the Caribbean
Jamaica
El Salvador
Brazil
Mexico
Venezuela, R. B. de
Dominican Republic
Panama
Argentina
Uruguay
Costa Rica
Chile

0 20 40 60 80 100

d. Self-employment (% of labor force)[4]

Dominican Republic
Bolivia
Venezuela, R. B. de
Honduras
Paraguay
Peru
Colombia
Guatemala
Jamaica
Ecuador
Latin America and the Caribbean
El Salvador
Panama
Brazil
Chile
Mexico
Costa Rica
Uruguay
Argentina

10 15 20 25 30 35 40 45 50

e. Lack of pensions (% of labor force)[5]

Bolivia
Paraguay
Ecuador
Nicaragua
Guatemala
Honduras
El Salvador
Mexico
Dominican Republic
Venezuela, R. B. de
Latin America and the Caribbean
Argentina
Brazil
Colombia
Jamaica
Uruguay
Panama
Chile
Costa Rica

20 30 40 50 60 70 80 90 100

f. Shadow economy (% of GDP)[6]

Bolivia
Panama
Peru
Guatemala
Uruguay
Honduras
Nicaragua
Latin America and the Caribbean
Brazil
Colombia
Jamaica
Ecuador
Venezuela, R. B. de
Dominican Republic
Mexico
Costa Rica
Argentina
Chile

0 10 20 30 40 50 60 70 80

Sources: Gasparini and Tornarolli 2006; investment climate surveys 2006; Loayza and Rigolini 2006; Schneider 2005; World Bank 2006b.

Note: 1. Informality is measured by the percentage of sales that businesses do not report for tax purposes (Investment Climate Surveys 2006).

2. "A salaried worker is informal if s(he) does not have the right to a pension linked to employment when retired" (Gasparini and Tornarolli 2006, 10).

3. "An individual is considered an informal worker if (s)he belongs to any of the following categories: (i) unskilled self-employed, (ii) salaried worker in a small private firm, (iii) zero-income worker" (Gasparini and Tornarolli 2006, 8).

4. "Self-employment is measured as the percentage of self-employed workers with respect to the total active population" (Loayza and Rigolini 2006, 15).

5. Share of the labor force not covered by a pension scheme (World Bank 2006b).

6. "The shadow economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following reasons: (1) to avoid payment of income, value added or other taxes, (2) to avoid payment of social security contributions, (3) to avoid having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc., and (4) to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms" (Schneider 2005, 600).

In all cases, regional figures are unweighted averages.

"productive" definition, focused more on informal *firms.* Since these data are available on a global basis, they are commonly used in empirical work.[8] The weighted average of 28 percent of the Latin American and Caribbean labor force is below those of Africa and South Asia, but above those of the OECD and Eastern Europe. Along these lines, the report tabulates a measure calculated by Gasparini and Tornarolli (2006) that is broadly consistent with the ILO measure for Latin America (see the annex) but adds in paid workers in those microfirms. For the purposes of this report, we will refer to the ILO definition as "self-employment" and to the Gasparini-Tornarolli definition as the "productive" definition.

A second definition, called by Saavedra and Chong (1999) the "legalistic" or "social protection" definition, focuses more on coverage of workers by mandated labor protections. It thus is more concerned with workers' welfare per se (or perhaps with *job quality*) than with the nature of their employment; and when not including self-employed or owners, who are often not required to register with social security administrations, it captures compliance with labor laws. This is more consistent with the ILO's (2002) more recent emphasis in its "Decent Work" report on noncompliance by either enterprises or workers with all or some of the rules and regulations in the body of national or local legislation, commercial, and/or labor legislation. This new focus implies expanding the definition to include informal contractual arrangements among otherwise formal entities (see box 1.1). Hence, this definition puts a greater emphasis on the division between *informal salaried workers* in any size firm and the *informal self-employed;* and, in fact, the report will show that there are substantial differences in the behavior of these two classes of workers that make the bifurcation of informal workers critical for analysis. Global data do not exist for this measure, but, again, Gasparini and Tornarolli (2006) have calculated consistent series for Latin America, and other authors providing background papers for this report use some close variant.

Overall, both the productive and the legalistic measures give broadly similar measures of the level of informality in Latin America and the Caribbean. However, the individuals under each measure may differ substantially.[9] Column (ii) of table 1.1 tabulates the share of the labor force that, when classified as formal under the productive definition, is informal under the legalistic definition. In practice, it is a measure of what fraction of workers in firms with more than five employees probably legally should be covered by social security but are not. The data suggest that evasion in larger firms is a relatively minor issue in Uruguay, for instance— around 10 percent—and quite large in Ecuador, Nicaragua, and Peru—more than 30 percent. Column (i)/(i)+(ii) captures a related measure—the percentage of workers classified as formal in the productive definition and as formal in the legalistic definition. The fit ranges from poor in Bolivia, Nicaragua, Paraguay, or Peru (at rates of 30–40 percent) to reasonably good in Brazil, Chile, Uruguay, and Colombia. The third column of the next panel suggests that workers classified as informal in small firms are, in fact, generally informal in the legalistic definition as well, with rates of overlap often greater than 90 percent.

Several points merit mention here. First, the substantial mismatch of classification of formal workers in the first panel, as captured in column (ii), reflects the different questions underlying the measures; the ILO focus on small firms in the productivity definition, by design, cannot capture evasion or coverage in large firms, while the legalistic definition is more informative in this respect. While, in the aggregate, the two measures are highly correlated, for particular questions the definition matters. For example, in 7 out of 12 countries in figure 1.4, the relative representation of women versus men in the informal sector depends on the particular measure used.

Second, informality measured along the labor dimensions in many countries is largely a small-firm phenomenon. In most countries, the share of uncovered workers in firms with more than 10 workers is a minority; and, as figure 1.5 shows for Argentina, Brazil, and Mexico, in firms of more than 10 workers, the share of workers plausibly not covered is small. Though there has been increasing informalization of the large-firm labor force in Argentina and metropolitan Brazil (and the reverse in Mexico), the relevant margins for understanding the *razón de ser* of the informal laborer seem more along the margin of small firms growing into formality, and the intrasectoral margin of worker flows among the formal and informal sectors. Hence, along this dimension of formality—that is, compliance with labor laws—the intrafirm margin with large firms in mind, while still employing an important share of informal workers in some countries, does not seem to be where the majority of the action is, overall. Understanding the decisions that employers and workers in small firms make on whether to register with the authorities becomes a central question to be taken up in later chapters.

A final direct measure capturing social protection is an index of pension coverage of the population that considers

TABLE 1.1

Correspondence of the "productive" and "legalistic" definitions of informality

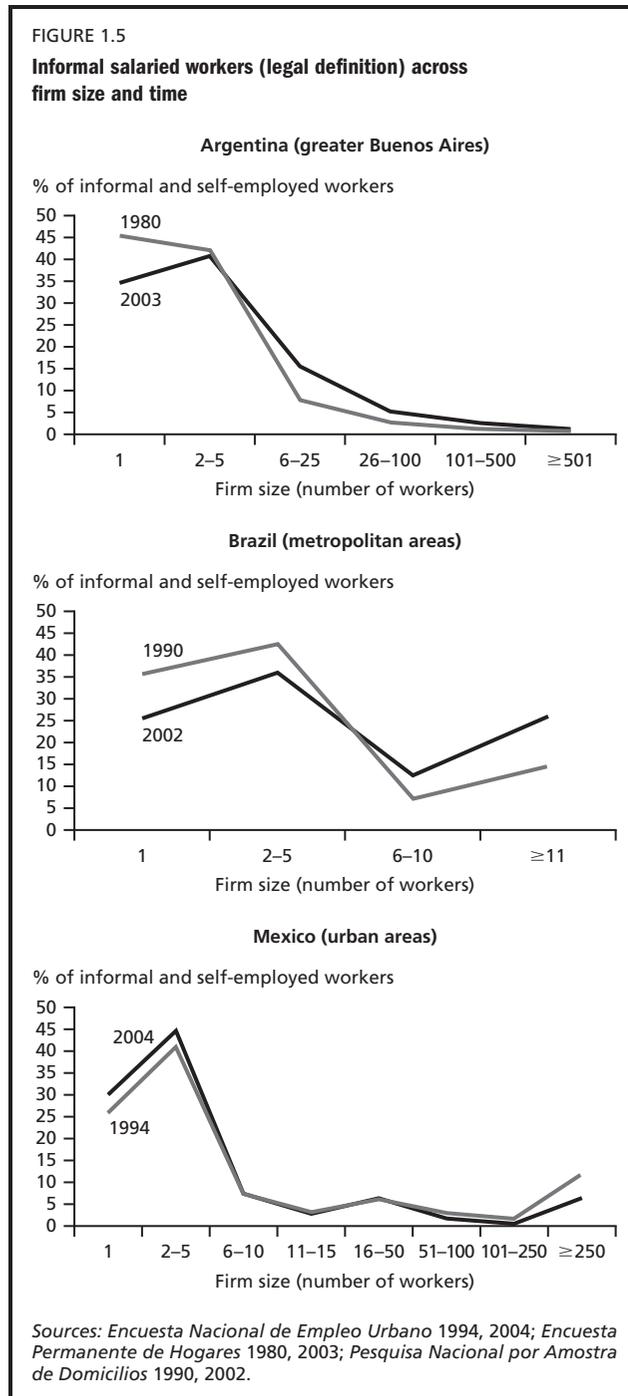| Sample			Formal productive			Informal productive			Total (i)+(ii)+(iii)+(iv)	(i)+(iv)
			Formal L (i)	Informal L (ii)	Formal P & L (i)/(i)+(ii)	Formal L (iii)	Informal L (iv)	Informal P & L (iv)/(iii)+(iv)		
Argentina	2004	Only salaried workers	50.6	15.6	76.5	6.1	27.8	82.1	100.0	78.4
Bolivia	2002	Only salaried workers	24.6	35.5	40.9	1.1	38.9	97.3	100.0	63.5
		All workers	7.6	15.5	33.0	0.8	76.1	98.9	100.0	83.7
Brazil	2003	Only salaried workers	53.3	10.6	83.4	11.8	24.2	67.2	100.0	77.6
		All workers	36.2	8.8	80.4	10.2	44.8	81.5	100.0	81.0
Chile	2003	Only salaried workers	67.0	11.6	85.3	10.7	10.8	50.1	100.0	77.7
		All workers	51.8	11.4	82.0	11.2	25.6	69.5	100.0	77.4
Colombia	1999	Only salaried workers	86.0	14.0	86.0				100.0	86.0
		All workers	13.6	10.6	56.1	2.8	73.0	96.3	100.0	86.6
Ecuador	1998	Only salaried workers	36.9	32.4	53.2	2.6	28.1	91.6	100.0	65.0
El Salvador	2003	Only salaried workers	49.9	20.8	70.6	1.9	27.4	93.6	100.0	77.3
		All workers	28.8	16.2	64.0	1.5	53.4	97.2	100.0	82.2
Guatemala	2002	Only salaried workers	37.8	24.1	61.0	2.3	35.7	93.9	100.0	73.5
		All workers	15.4	15.1	50.5	1.0	68.5	98.5	100.0	83.9
Mexico	2002	Only salaried workers	37.6	25.7	59.4	3.4	33.2	90.7	100.0	70.9
Nicaragua	2001	Only salaried workers	29.5	30.7	49.0	2.3	37.5	94.1	100.0	67.0
		All workers	14.9	20.4	42.2	1.5	63.3	97.7	100.0	78.1
Paraguay	2003	Only salaried workers	23.6	27.4	46.2	2.1	47.0	95.8	100.0	70.6
		All workers	10.5	17.1	38.1	1.4	71.0	98.1	100.0	81.5
Peru	2002	Only salaried workers	26.6	36.1	42.4	1.4	35.9	96.2	100.0	62.5
		All workers	11.4	21.6	34.6	1.4	65.5	97.9	100.0	77.0
Uruguay	2004	Only salaried workers	64.1	9.9	86.7	8.3	17.7	68.0	100.0	81.8
		All workers	49.3	8.4	85.5	10.0	32.3	76.3	100.0	81.6
Venezuela, R. B. de	2003	Only salaried workers	53.4	19.2	73.6	5.0	22.4	81.8	100.0	75.9

Source: Gasparini and Tornarolli 2006.
Note: Table shows what fraction of workers categorized as informal under the pro ductive" definition are also informal under the "legalistic" definition, and analogously for the formal. Formal L = formal using legalistic definition, informal L = informal using legalistic definition, and formal P&L = formal under both definitions.

FIGURE 1.4

Informality and gender: women versus men (ages 25–64)

Source: Gasparini and Tornarolli 2006.
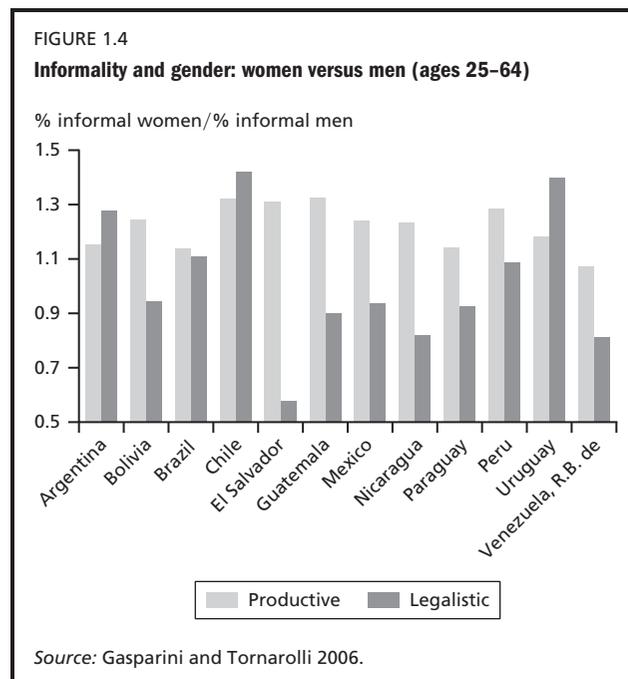
both labor-related and universal pension schemes. This measure raises an important issue. If our concern is that families are covered by certain protections, it need not be the case that these protections are linked to the particular labor contract. Throughout the region, there has been an expansion of social protection programs that aim to provide a minimum safety net for families, regardless of labor market status. These are not captured in the pension measure, and cross-country comparisons are not yet available.

Finally, all these stock measures of informality obscure the fundamentally dynamic nature of the labor market. Chapters 2 and 4 document high flows between jobs with and without formal pension programs. Not only does this suggest a need to understand workers' choices among sectors and the constraints they face in making them, but also that the individuals in the informal population change substantially from one month to the next. Such high flows have implications for what coverage really means. As chapter 7 will show, in Mexico and Uruguay, poor workers flow

FIGURE 1.5

Informal salaried workers (legal definition) across firm size and time

Argentina (greater Buenos Aires)

% of informal and self-employed workers

Firm size (number of workers)

Brazil (metropolitan areas)

% of informal and self-employed workers

Firm size (number of workers)

Mexico (urban areas)

% of informal and self-employed workers

Firm size (number of workers)

Sources: Encuesta Nacional de Empleo Urbano 1994, 2004; Encuesta Permanente de Hogares 1980, 2003; Pesquisa Nacional por Amostra de Domicilios 1990, 2002.
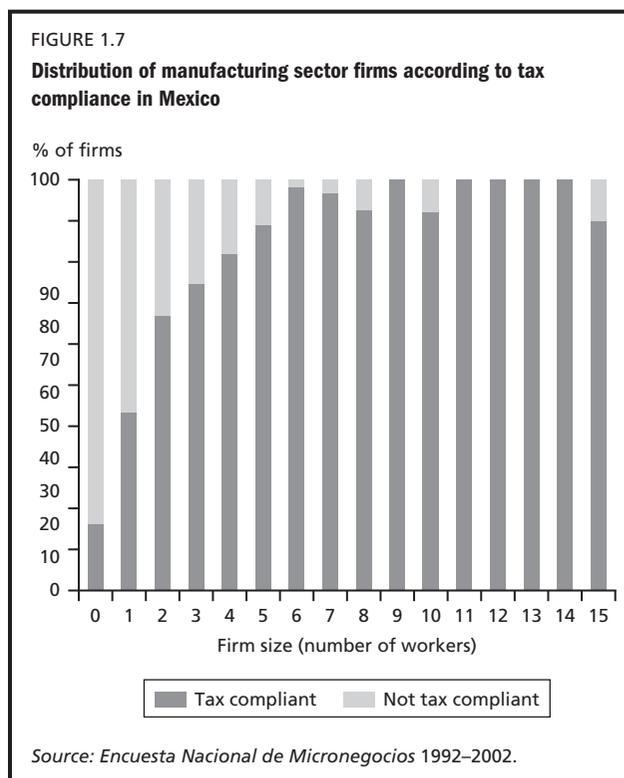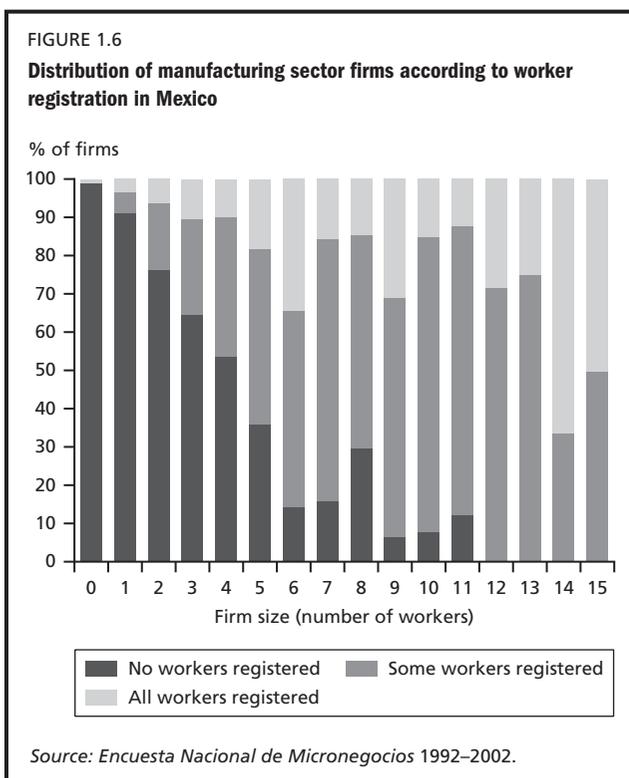
so frequently in and out of covered jobs that, in practice, they will never accumulate enough years to gain a pension. They pay, but are de facto not covered. Further, such flows also raise the question (discussed at length in chapters 2 and 3) of what a worker's choice to be uncovered implies about the social protection and, to a lesser extent, pension definitions as measures of worker welfare. That is, if, as appears to be the case in the Dominican Republic and

Mexico, there is little evidence that either informal salaried or self-employed workers are less well-off than comparable workers in protected jobs, why should policy makers care about the particular bundle of money and benefits in which those workers are paid? The answer is complex but underscores the importance of understanding decisions across the margin of worker flows between the two sectors for the interpretation of informality measures.

The multidimensional continuum of informality

As suggested above, formality is multidimensional and continuous. At the microfirm level, there is a substantial gray area (see Tokman 1992) where firms comply with certain norms and not necessarily to the same degree. Gray areas prevail and, in the extreme, one can argue that a realistic—but one that is less easy to operationalize—description is that of a continuum from complete lack of integration with formal institutions to full compliance with all.

Compliance along any one particular dimension of formality is not discrete. For example, Robles et al. (2001) find that 16 percent of microfirms in Peru do not pay any tax, 83 percent pay some taxes, and 2 percent pay all taxes that they are required to pay. Figure 1.6 suggests that, in Mexico, firms of, say, seven workers may well have one worker registered but not all. Further, the registered–not registered dichotomy does not capture the gradations of protection that exist across labor contracts. Though not formally covered, workers nonetheless appear to benefit from some social norms of fairness. Souza and Baltar (1979) introduced the concept of the *efeito farol,* whereby the minimum wage ends up being an indexation mechanism valid also for the informal sector. In fact, Maloney and Nuñez (2001) and Cunningham (2007) show that, in many countries of Latin America, the minimum wage is most binding among the *informal* salaried, suggesting that salary norms are respected outside the realm of the official work contract. Chavez and Chacaltana (1994) show, in a study of microenterprises in Peru, that a large percentage of workers without a formal contract and without social protection benefits do enjoy vacations and the customary December bonus salary, much as dictated by labor legislation. Among larger firms, such norms may carry over to workers hired illegally (*bajo la mesa*) or subcontracted out, but on the same premises. In Argentina, however, there is an almost one-to-one correspondence between pension coverage and other labor benefits, suggesting substantial variance by country.

FIGURE 1.6

Distribution of manufacturing sector firms according to worker registration in Mexico

% of firms

Firm size (number of workers)

- No workers registered
- Some workers registered
- All workers registered

Source: Encuesta Nacional de Micronegocios 1992–2002.

FIGURE 1.7

Distribution of manufacturing sector firms according to tax compliance in Mexico

% of firms

Firm size (number of workers)

- Tax compliant
- Not tax compliant

Source: Encuesta Nacional de Micronegocios 1992–2002.

The point remains, however, that many of those workers who are unprotected in large firms (identified in table 1.1) may, in fact, enjoy other elements of the standard labor contract.[10]

But it is also the case that the firms may be formal along one dimension, but not along another. Levenson and Maloney (1998), taking a broad view of formality as integration with not only government but also civil society more generally, find for Mexico that firms may pay taxes, but only pay labor taxes as they get larger, and engage with business associations only when they grow larger still. Figure 1.6, combined with figure 1.7, suggests that while most firms with a labor force of five workers are registered with tax authorities, compliance with labor law is far less complete. This is consistent with the findings of Robles et al. (2000) from Peru that the majority of firms pay the value-added tax, just over half pay municipal taxes, 45 percent pay income taxes, and 13 percent pay labor taxes. For larger firms, as later chapters will show, there tends to be partial formality that is relatively well synchronized across the tax and labor dimension. The logic here is clearer: larger, more frequently monitored firms will raise suspicions if they report half of their true product, but all of their workers producing it. Hence, the logic driving less easily monitored microfirms operating fuzzily

across the de Soto margin is likely to be somewhat different from that of larger firms partially evading obligations.

Indirect and modeling approaches to estimating aggregate informality

Indirect methods are macroeconomic in nature, and combine various aggregate economic variables and a set of assumptions to produce estimates of total economic activity (that is, measured and unmeasured, official and unofficial). Box 1.2 outlines several popular methods—in particular, those based on unexplained components of money demand or electricity consumption—and some of their drawbacks. By far the most common method is that of the Multiple Indicator–Multiple Cause (MIMIC) Model that imputes a level of underlying informality from a set of presumed causes of informality on one hand, and measurable consequences of it on the other. This exercise was first undertaken by Loayza (1996) for Latin America with a relatively tight, theoretically motivated set of input and outcome variables. However, recently, a more expansive estimate of the "shadow" economy as a share of gross domestic product (GDP) by Schneider and Enste (2000, 2002) has been tabulated globally and is presented in panel (f) of figure 1.3. As box 1.2 suggests, these have been

BOX 1.2
Indirect methods of estimating informality

One indirect method of estimating informality is to attribute the discrepancy between aggregate income and expenditure from the National Income and Product Accounts, which capture economic activity, to the informal sector. For this method to work, it is necessary to have measures of gross domestic product (GDP) obtained independently through the expenditure and the income approaches. Given that only one independent measure of GDP is typically available for most countries, in practice the application of this approach has been limited to a few developed countries.

Another indirect method commonly employed is the physical input (electricity consumption) approach. This method assumes that electricity consumption is the "single best physical indicator of overall [official and unofficial] economic activity" (p. 27). The method then defines the growth rate of the shadow economy as "the difference between the growth of official or measured GDP and the growth rate of electricity consumption" (p. 28). This method has been criticized on several grounds, all related to the assumption of a constant coefficient of use per unit of GDP. First, it does not consider technological progress, which reduces the amount of electricity consumption per unit of output. Second, it needs to assume a base year in which the magnitude of the informal economy is zero or negligible—an unrealistic assumption for most countries. Third, it does not consider the incorporation over time of new households to the electric grid, a fact that explains a large fraction of the increase in electricity consumption in developing countries.

A third indirect method that has also been commonly employed is the currency demand approach. This method begins by estimating a form of money demand equation in which the dependent variable is the ratio of cash holdings to current and deposit accounts (M0/M2). The equation controls for most known determinants of money demand; it also includes as covariates variables that are thought to be determinants of the shadow economy (for example, the tax burden). It then defines the growth rate of the shadow economy as the difference between the fitted values obtained using the estimated model and the observed values from actual data. Just like in the case of the physical input approach, this method has been criticized on several grounds. First, it assumes a common velocity of circulation of money between the official and unofficial economies. Second, transactions in the shadow economy are assumed to occur only in cash. Third, it also assumes a base year in which the magnitude of the informal economy is zero or negligible—again, an unrealistic assumption for most countries.

Thus, both the physical input and the currency demand methods—two of the most widely used approaches—are somewhat arbitrary in the following sense. Depending on the assumption made about the base year in which the magnitude of the shadow economy is zero or negligible, one can obtain widely different estimates of the magnitude of the shadow economy.[1]

The third group of methods is the model approach. The most popular among these is the Multiple Indicator–Multiple Cause (MIMIC) or structural equation model.[2] The MIMIC approach postulates that magnitude of the unofficial economy can be modeled as a latent or index variable. While this variable is unobservable, its causes (for example, an increase in the tax burden) and effects (such as an increase in the demand for currency) can be observed directly.

A system of equations forms the basis of this model: one set models the effects (or indicators) as a function of the latent variable; the other group models the magnitude of unofficial economy as a function of the causal variables. The parameters in this system of equations are estimated simultaneously, typically using maximum likelihood. The fitted values of the latent or index variable obtained from the reduced form equation are then used to produce an estimate of the unofficial economy.

The model approach has been criticized (see Breusch 2005) since it has been shown that its results are sensitive to transformations of the data, to the units of measurement, and to the sample used. Another criticism is that no theory is used in order to determine which variables to include as indicators or as causes. Moreover, the shadow estimates, while relying on the MIMIC Model to generate trends over time, appear to rely on traditional currency demand or the physical input methods for the initial levels, which makes it vulnerable to the criticisms of these two methods.

Notes
1. See Thomas (1993, 1999) for a more detailed description and criticism of these two methods.
2. For a detailed description and critique of these models, see Breusch (2005).

Source: García-Verdú 2007.

BOX 1.3

Schneider and Enste in the New World: Checking MIMIC estimates against Mexican data

Mexico is one of the few countries that calculate official statistics on the contribution of the informal sector to total value added. The National Statistical Institute (INEGI) employs the International Labour Organisation's official definition of the informal sector, and imputes its value added using a variety of sources. Over the period 1993–2003, the INEGI calculates that the informal sector averaged 12.4 percent of gross domestic product (GDP)—a share that remained relatively constant across the period (figure at right). This conflicts with the estimates from Schneider (2005) and Schneider and Enste (2000, 2002), which suggest that over the periods 1990–91 and 1999–2000, the shadow economy in Mexico increased from 24.1 to 30.1 percent of GDP.

Official and unofficial estimates of the informal economy, Mexico 1993–2003

| | INEGI[1] (left) | ● Schneider[2] (right) | ◆ Loayza[3] (right) |
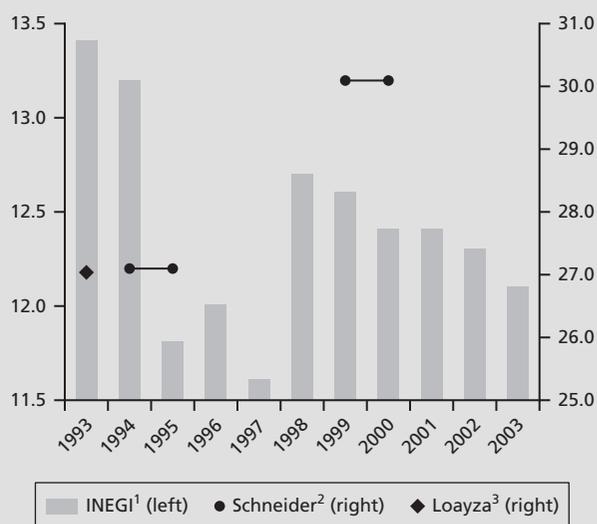
Sources: 1. Cuenta Satélite del Subsector Informal de los Hogares. Sistema de Cuentas Nacionales de México. Instituto Nacional de Estadística, Geografía e informática (INEGI).
2. Schneider (2005), using DYMIMIC and currency-demand methods.
3. Loayza (1996), using MIMIC Method.

subject to substantial criticism for, among other reasons, their relatively atheoretical combination of different causal factors and indicators, and the difficulty in assuming that informality is the only thing linking the two. Both suggest that the shadow economy runs the risk of being a measure of an agglomeration of known size but unclear content. An exercise comparing MIMIC estimates with official estimates is presented for Mexico in box 1.3.

Correlations among measures and trends over time

As table 1.2 indicates, globally, the pensions, self-employment, and shadow measures show a modest degree of correlation generally of the expected sign. All are importantly negatively correlated with GDP. This makes certain sense since, as figure 1.8 shows, self-employment decreases sharply with development, from high levels in Latin America and the Caribbean region (60 percent in Peru) to near single-digit levels in the OECD. The close connection between self-employment and GDP per capita has already been documented by, among others, Blau (1987), Loayza and Rigolini (2006), and Maloney (2001) with a variety of

explanations, some of which will be touched on in this volume. Again, since most independent workers in Latin America are not covered by pensions, and many informal salaried workers are found working in these very small firms, we may expect lack of pension coverage to follow GDP closely as well. Globally, the shadow economy measure is moderately correlated with self-employment and pension coverage.[11] The limited correlation of the tax compliance measure with both GDP and the other measures is suggestive that, if it is reliable, it may be measuring a different phenomenon. As chapter 8 will show, tax evasion or elusion may be a relevant phenomenon across the firm-size spectrum and be related to levels of social norms or collective responsibility, and less to income levels. Labor informality measured as lack of compliance with legislation, however, may fundamentally be a small, low-productivity firm issue rather than a compliance issue per se.

In Latin America, the productive measure, including self-employed and all employees, and the legalistic/social protection measure are highly correlated (.8–.9) with each other and, not surprisingly, with the pension measure. It is perhaps not unexpected that all are somewhat less

TABLE 1.2

Correlations across measures of informality

All countries	Shadow economy	Self-employment	Sales nonreported	Lack of pensions	GDP pc PPP 05
Shadow economy	1				
Self-employment	0.58	1			
Sales nonreported	0.13	0.17	1		
Lack of pensions	0.60	0.81	0.43	1	
GDP per capita (PPP 05)	−0.69	−0.76	−0.30	−0.85	1

Latin America	Shadow economy	Self-employment	Sales nonreported	Lack of pensions	Informality (productive)	Informality (legalistic)	GDP pc PPP 05
Shadow economy	1						
Self-employment	0.35	1					
Sales nonreported	0.29	−0.06	1				
Lack of pensions	0.43	0.62	0.04	1			
Informality (productive)	0.60	0.70	0.11	0.80	1		
Informality (legalistic)	0.58	0.68	0.32	0.89	0.90	1	
GDP per capita (PPP 05)	−0.58	−0.75	−0.24	−0.66	−0.83	−0.75	1

Sources: Gasparini and Tornarolli 2006; investment climate surveys 2006; Loayza and Rigolini 2006; Schneider 2005; World Bank 2006b.
Note: GDP = gross domestic product; pc = per capita; PPP = purchasing power parity; PPP05 = data correspond to year 2005.
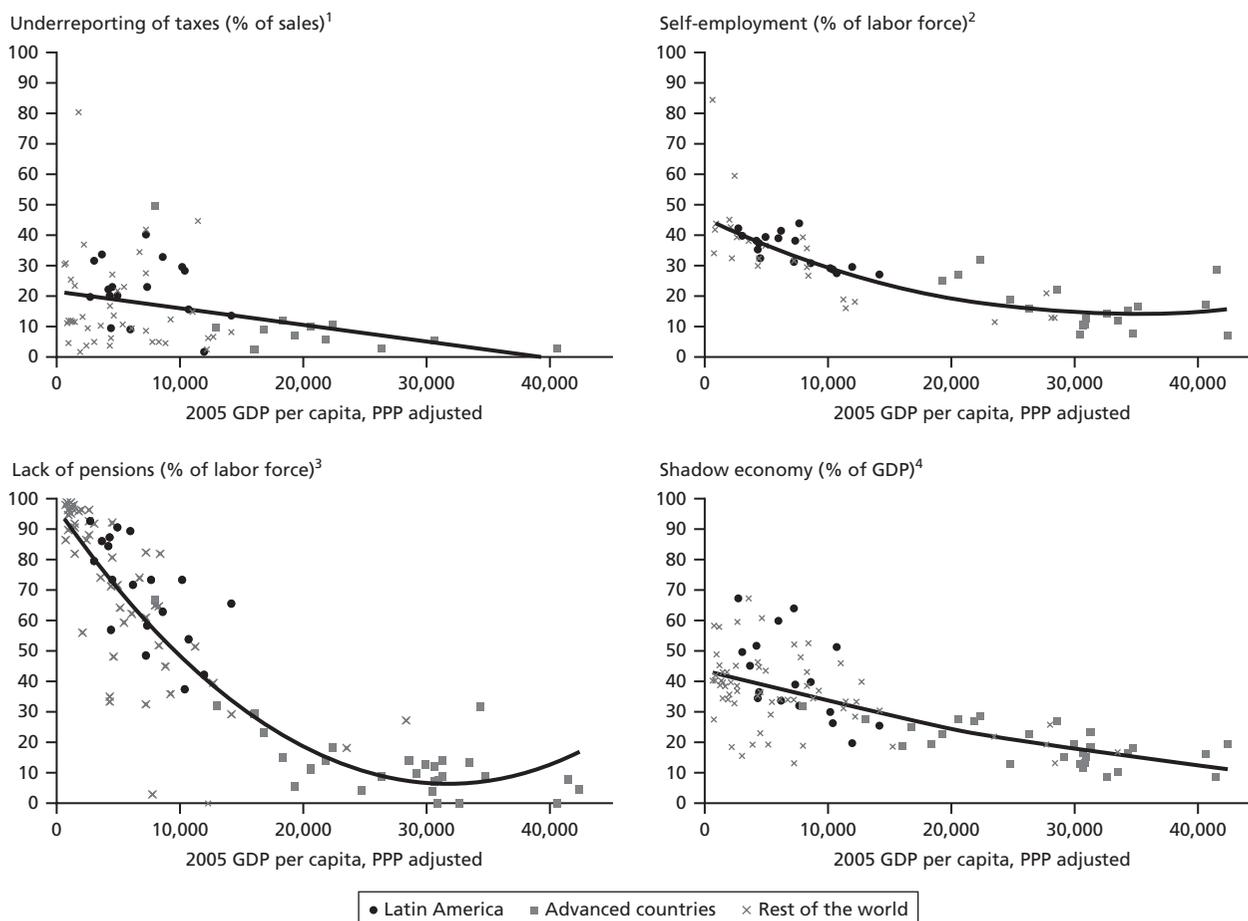
correlated with the ILO self-employment measure that omits salaried workers. The underreporting of sales measures is capturing something else and is poorly correlated with other measures. Finally, the shadow economy is not well correlated with the self-employment or underreporting of sales measure or pensions measure, but is moderately correlated with the productivity and legalistic measures. Its poor performance on the self-employment measure may be due to some odd values of the measure. For instance, Uruguay has relatively low levels of self-employment, but is among the highest in the size of its simulated shadow economy.

Trends across time

The underreporting of sales is available for only a handful of countries; however, we report the productive, legal/social protection, shadow economy, lack of pensions, and ILO self-employment for Latin America and the Caribbean where available (figure 1.9). With the exception of the self-employed definition, all measures suggest increases across the available sample period, although there are suggestive differences among them and even within individual country experiences. For instance, Argentina shows important increases in the legal and pension coverage variable, but not in the productive measure. As will be documented in chapter 4, this arises from the fact that the increase happened through increasing informalization of large firms, not the emergence of new informal microfirms. Some anomalies—such as why Ecuador should have the largest increase in lack of coverage in pensions, but apparently little increase in legal informality—are likely due to the time spans covered. Also important to keep in mind are the subnational differences in trends. Though the legal definition for Brazil as a whole shows little increase, there has been a dramatic increase in *metropolitan* informality across the same period, and it will be explored in chapter 4. The shadow measure somewhat strangely shows global increases in informality for all countries of the world from 1990 to 2000—increases from 30 to 36 percent of GDP, an increase of 24 percent—and substantial increases in Latin America.[12] Perhaps the estimates are a bit too substantial, showing an average increase over the period 1990–2000 of 7.4 percentage points or approximately 21 percent. This is far above every other measure and is reasonable only if we assume that productivity in the informal sector rose substantially more than that in the formal sector across the period.[13] Because of these odd results, and the theoretical concerns discussed above, the report does not rely significantly on this measure in its analysis.

FIGURE 1.8

Global correlation of measures of informality with GDP

Underreporting of taxes (% of sales)[1]

Self-employment (% of labor force)[2]

Lack of pensions (% of labor force)[3]

Shadow economy (% of GDP)[4]

● Latin America   ■ Advanced countries   × Rest of the world

Sources: Investment climate surveys 2006; Loayza and Rigolini 2006; Schneider 2005; World Bank 2006b.

Note: 1. Informality is measured by the percentage of sales that businesses do not report for tax purposes (Investment Climate Surveys 2006).

2. "Self-employment is measured as the percentage of self-employed workers with respect to the total active population" (Loayza and Rigolini 2006, 15).

3. Share of the labor force not covered by a pension scheme (World Bank 2006b).

4. "The shadow economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following reasons: (1) to avoid payment of income, value added or other taxes, (2) to avoid payment of social security contributions, (3) to avoid having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc., and (4) to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms" (Schneider 2005, 600).

Nonetheless, the overall perception from the various measures and other sources, as well as the general "feeling" of the region, is that informality has risen. What will be dealt with in the next chapters are some of the forces driving the movements over the last decades and across which margins.

Conclusions

This chapter has sought to unpack our understanding of the term *informality,* why we may care about it, and, broadly speaking, what dynamics may be driving its elements. The number of phenomena it encompasses and the limitations of its measures are manifold, raising some serious doubt about how useful the term really is. Yet two stylized facts remain: First, however measured, Latin America ranks high in its degree of informality. Not especially high for its level of development, but informality remains an important phenomenon. Second, several countries have experienced striking increases in informality across the last decades. Whatever adverse regulatory, poverty, growth, or social morale implications informality may have, they have become more relevant with time.

FIGURE 1.9

Trends in informality by various definitions

Informal labor force: Productive definition (% of employed workers)[1]

	Percent
Venezuela, R. B. de 1989–2003	18.5
Uruguay 1992–2004	7.0
Honduras 1992–2002	6.8
Panama 1995–2003	5.4
Colombia 1996–2004	4.8
Peru 1997–2003	4.6
Jamaica 1996–2002	3.4
Dominican Republic 1996–2004	3.1
Paraguay 1997–2003	2.6
Mexico 1996–2002	2.4
El Salvador 1991–2003	2.2
Argentina 1995–2005	1.9
Bolivia 1997–2002	1.5
Ecuador 1994–2003	1.1
Costa Rica 1992–2003	−0.4
Nicaragua 1993–2001	−0.9
Brazil 1992–2003	−3.3
Chile 1990–2003	−5.2

(x-axis: Percent, −10 to 20)

Informal labor force: Legalistic definition (% of salaried workers)[2]

	Percent
Argentina 1992–2005	11.9
Venezuela, R. B. de 1995–2003	7.7
Brazil (metropolitan) 1992–2002*	6.2
Nicaragua 1993–2001	5.9
Peru (metropolitan Luna) 1990–2000	4.5
Mexico 1990–2004a **	4.0
Chile 1990–2003	1.1
Ecuador 1994–98	−0.7
Brazil 1990–2003	−0.8
Paraguay 1997–2003	−0.9
Colombia 1996–99	−2.4
El Salvador 1991–2003	−12.0

(x-axis: Percent, −15 to 15)

Lack of pensions (% of labor force)[3]

	Percent
Ecuador 1990–2004	12.75
Argentina 1992–2004	10.26
Nicaragua 1993–2001	8.08
Costa Rica 1990–2004	3.83
Venezuela, R. B. de 1995–2004	3.82
Chile 1990–2003	2.75
Uruguay 1995–2004	2.19
Colombia 1996–99	0.64
Brazil 1992–2002	0.54
El Salvador 1995–2003	−4.33

(x-axis: Percent, −15 to 15)

Self-employed: ILO (% of employed workers)[4]

	Percent
Colombia 1992–2005	17.3
Bolivia 1990–2000	6.9
Dominican Republic 1991–2005	4.7
Chile 1996–2005	−0.1
Costa Rica 1990–2005	−1.4
Jamaica 1997–2005	−2.3
Panama 1991–2005	−2.4
El Salvador 1995–2004	−2.7
Honduras 1996–2005	−3.4
Argentina 1996–2005	−3.7
Peru 1996–2005	−6.9
Mexico 1991–2005	−8.6

(x-axis: Percent, −10 to 20)

Shadow economy 1990–2000 (% of GDP)[5]

	Percent of GDP
Peru	12.8
Panama	12.7
Bolivia	11.7
Guatemala	10.1
Uruguay	9.8
Honduras	8.9
Average	7.3
Brazil	7.3
Chile	6.2
Venezuela, R. B. de	6.2
Mexico	6.0
Colombia	5.7
Ecuador	5.5
Nicaragua	5.1
Jamaica	5.0
Costa Rica	4.2
Dominican Republic	3.8
Argentina	3.3

(x-axis: Percent of GDP, 0 to 14)

Sources: Gasparini and Tornarolli 2006; ILO 2006; Loayza and Rigolini 2006; Schneider 2005; World Bank 2006b.

Note: 1. "An individual is considered an informal worker if (s)he belongs to any of the following categories: (i) unskilled self-employed, (ii) salaried worker in a small private firm, (iii) zero-income worker" (Gasparini and Tornarolli 2006, 8). 2. "A salaried worker is informal if s(he) does not have the right to a pension linked to employment when retired" (Gasparini and Tornarolli 2006, 10). 3. Share of the labor force not covered by a pension scheme (World Development Indicators 2006). 4. "Self-employment is measured as the percentage of self-employed workers (employers, own account workers) and contributing family workers with respect to the employed workers" (ILO 2006, 15). 5. "The shadow economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following reasons: (1) to avoid payment of income, value added or other taxes, (2) to avoid payment of social security contributions, (3) to avoid having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc., and (4) to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms" (Schneider 2005, 600).

*% of workers without *carteira* (work card). **Based on the balanced panel sample (common municipalities) for the period 1990–2004.
a. Author's calculations based on ENEU.

TABLE 1A.1

Comparisons of ILO and Gasparini-Tornarolli measures of self-employment

		ILO Table: Proxied with Gasparini Data vs. ILO Data								
		Informal sector								
		Independent workers		**Domestic workers**		**Microfirms**		**Total**		
Country	**Year**	**Gasparini**	**ILO**	**Gasparini**	**ILO**	**Gasparini**	**ILO**	**Gasparini**	**ILO**	**Difference**
Argentina	2004	20.7	17.9	—	7.4	24.6	19.0	45.3	44.3	1.0
Bolivia	2002	47.4	44.6	—	4.3	18.2	17.8	65.6	66.7	−1.1
Brazil	2003	25.4	21.0	—	9.3	22.2	14.3	47.6	44.6	3.0
Chile	2003	21.3	21.5	—	6.2	15.7	11.1	37.0	38.8	−1.8
Colombia	2004	39.6	37.6	—	5.8	27.9	16.6	67.5	59.9	7.6
Costa Rica	2003	22.0	18.1	—	5.3	19.5	20.2	41.5	43.6	−2.1
Ecuador	2003	35.1	31.9	—	5.2	20.6	19.4	55.7	56.5	−0.8
El Salvador	2003	36.7	32.1	—	5.7	20.3	16.4	57.0	54.2	2.8
Honduras	2003	45.4	40.8	—	4.8	18.3	13.8	63.7	59.4	4.3
Mexico	2002	24.8	19.5	—	4.4	23.0	17.9	47.8	41.8	6.0
Panama	2003	34.8	24.7	—	7.1	15.4	10.7	50.2	42.5	7.7
Paraguay	2003	33.9	30.0	—	11.8	26.6	19.9	60.5	61.7	−1.2
Peru	2003	40.3	34.5	—	5.7	19.0	15.8	59.3	56.0	3.3
Rep. Dominicana	2004	39.1	32.5	—	5.7	12.2	11.3	51.3	49.5	1.8
Uruguay	2004	24.1	17.2	—	9.1	18.3	11.5	42.4	37.8	4.6
Venezuela, R. B. de	2003	39.4	33.0	—	3.0	14.7	17.6	54.1	53.6	0.5

Sources: Gasparini and Tornarolli 2006; ILO 2006.
Note: — = not available.

Annex

For most of the report, we require more detail than provided by the ILO tables. Hence, Gasparini and Tornarolli (2006) have replicated the ILO data with identical data and definitions. Although in this chapter we use measures that include informal salaried workers in our definition, we check here to be sure that the subcomponent of our measure that corresponds to self-employment is similar to that of the ILO. The right-hand column of table 1A.1 suggests that, with some exceptions—Colombia, Mexico, Panama—the two series are quite close.

Notes

1. This section draws heavily on Maloney (2006).

2. Without abandoning the central principle, a certain amount of *state-sanctioned evasion* may be optimal. Undertaking a cost–benefit analysis of monitoring and enforcement, the state may decide to leave its coverage incomplete. As an example, many countries collect no taxes below a certain level of income or have streamlined labor regulations for microfirms. In this case, the "informal" becomes simply the population that it wasn't socially optimal to force to be formal.

3. The tax morale literature departs from the finding that, under normal estimates of individual risk aversion, the existing penalties for cheating and the probability of being caught are simply too low to explain the high rates of compliance in the advanced countries. See, for example, Graetz and Wilde (1985); Alm, McClelland, and Schulze (1992); and Frey and Feld (2002).

4. We also know that, within the formal sector, individuals choose among degrees of formal sector protection (for example, how much insurance and what kind to buy).

5. See Livingstone (1991), who argues that many of these goods and services are "appropriate" for lower-income consumers. In fact, these consumers are willing—given their preferences, information, rates of discount, and income—to eat in a cheaper, less hygienic restaurant in any Latin American capital or ride a less safe taxi or mototaxi.

6. Sethuraman (1981), in another ILO report, mentioned that there was no evidence that informal workers were en route to or queuing for a formal sector job, but that their activities were a permanent source of income. This may testify more to extreme barriers to entry than to voluntariness in the sector.

7. For two comprehensive surveys of these methods, see Thomas (1993) and Schneider and Enste (2000, 2002).

8. The version of the original ILO definition presented here considers an individual as an informal worker if she or he belongs to any of the following categories: (1) unskilled self-employed, (2) salaried worker in a small private firm, or (3) zero-income worker. It is important to note that labor market–related definitions include within the informal sector at least two types of workers, self-employed people and informal wage earners for whom the micro determinants and motivations to participate in formal or informal economic arrangement vary, as will be discussed in chapter 2.

9. For a discussion of Brazil, see Henley, Arabsheibani, and Carneiro (2006).

10. The gray area of informality may also exist in the public sector where rigid hiring and firing laws generate the need to hire public

employees through diverse contractual arrangements, ranging from low-skilled workers who work for a subcontractor to highly skilled professionals who work permanently in public institutions but are paid as consultants. In most of these cases, these workers are formal in terms of tax compliance, but informal from the labor viewpoint.

11. The documentation is not always clear on what variables are used as causes and indicators, although, in some articles by Schneider and Enste (2000, 2002), self-employment is mentioned as a cause.

12. In particular, the estimate of the shadow economy as a share of GDP for the group of African countries is approximately the same as the estimate for Latin America and the Caribbean, despite the fact that the group's average GDP per capita is only 38 percent of the average GDP per capita in Latin America and the Caribbean. In the same way, the group of countries in Eastern Europe and Central Asia has a significantly lower estimate of the shadow economy as a share of GDP than does Latin America and the Caribbean, despite the fact that the group's average GDP per capita is only 9 percent higher than the average GDP per capita in Latin America and the Caribbean.

13. For operational purposes, the ILO defines informal employment as consisting of self-employed or own-account workers (excluding administrative workers, professionals, and technicians), unpaid family workers, and employers and employees working in establishments with less than 5 or 10 persons employed, and excludes paid domestic workers. For Latin America, ILO self-employment suggests that the informality rate increased from 42.8 to 47.4, a rise of 11 percent. Using the productive definition of the ILO (2002), Gasparini and Tornarolli (2006) and Rofman and Luchetti (2006) suggest that labor-defined informality has indeed increased over time in the region. Gasparini and Tornarolli argue that informality increased in 13 countries, fell in 2, and remained constant in 3.

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