GLOBALIZATION AND INFORMALITY:
TWO CHALLENGES TO DEVELOPMENT AND INTEGRATION

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One of the most important developments in recent decades has been the process of economic and social integration of many countries around the world. This process of "globalization" presents challenges and opportunities that have the potential to radically change the lives of millions of people. The rise of globalization is driven by economic openness but not limited to it, as it also includes a broad process of political, intellectual, and scientific integration. Along with the products of international trade and the flow of external capital an increasingly active exchange of new ideas, new technologies, and new policies is taking place in countries worldwide.

Despite its inherent difficulties, globalization is an advance that fosters hope for sustained development in most countries. History has shown that in the long run internationally integrated countries become more prosperous and more stable than those that take the autarchic path. When the European Renaissance began to mitigate the isolation and superstition of the Middle Ages, it was the outward-looking commercial and financial orientation of the city-states of Italy that fostered its dizzying emergence. That was also the case with Spanish colonies in the Americas during the nineteenth century. Under Napoleonic rule Spain could not maintain its monopoly on colonial trade routes and its colonies joined the rest of the world, prospering to such a degree that they gained their independence. When China "withdrew from the world" during the Ming Dynasty of the fifteenth century, it gradually lost its status as the most advanced country in the world, finally becoming one of the poorest. It is interesting to see how, in recent years, China is recovering its former glory at a rapid and steady pace, having opened its borders to foreign commerce, finance, and technology.

In the face of possible international integration, there is, however, a pending challenge for most developing countries. It is the challenge of overcoming the internal segmentation of their economies, bringing formality to the large group of activities and people who function outside the law and protection of the state. Informality is endemic to underdeveloped countries. According to estimates shown below, in developing countries an average of around 37% of production and 70% of employment are informal. By comparison, in developed countries, those average percentages are 16% and 8%.

The positive aspect of informality is its capacity to channel business energy and generate employment in contexts where the state is institutionally insufficient. In many countries, the informal sector is associated with creativity, ingenuity, and perseverance. For example, in Peru the informal sector leads in textile production, despite recognizably adverse conditions. By way of an illustration, figure 1 shows a detail of the Gamarra textiles business and shopping center in the heart of Lima. On the negative side, informality is inefficient in its use of basic public services such as police protection, recourse to the legal system, and social security. Thus, efforts by informal workers and businessmen do not manage to attain sustained economic and social development. Moreover, the lack of state institutional participation can lead to social dangers ranging from on-the-job injuries with no health insurance to major misfortunes due to ignoring safety laws. Figure 2 shows the fire at the informal Mesa Redonda Shopping Center very near Gamarra, which took 291 lives in 2002. That fire and loss of life could have been avoided if the shopping center had been obliged (or inclined) to formalize its situation.

The present essay seeks to examine what informality is, how it can be measured, what consequences it has for the wellbeing of countries, and what its fundamental determinants may be. The objective is to understand what can be done to bring the informal sector to full legality and what role the opportunities and challenges of globalization can play in that process. Methodologically, the essay studies informality from a macroeconomic and international perspective. It thus uses cross-sectional variations between countries of degrees of informality and potentially related variables in order to study their causes and consequences.

WHAT IS INFORMALITY?

Informality can be defined as the set of companies, workers, and activities operating outside

FIGURE 1

Informality as a channel for company energy. Daily activity at the Gamarra Business and Shopping Center, Lima.

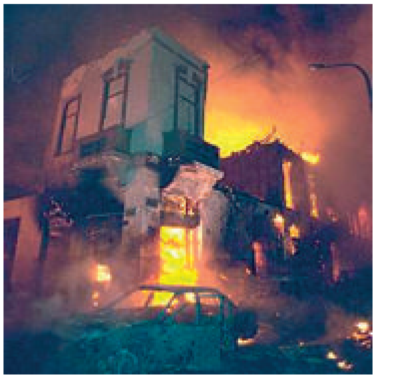


FIGURE 2

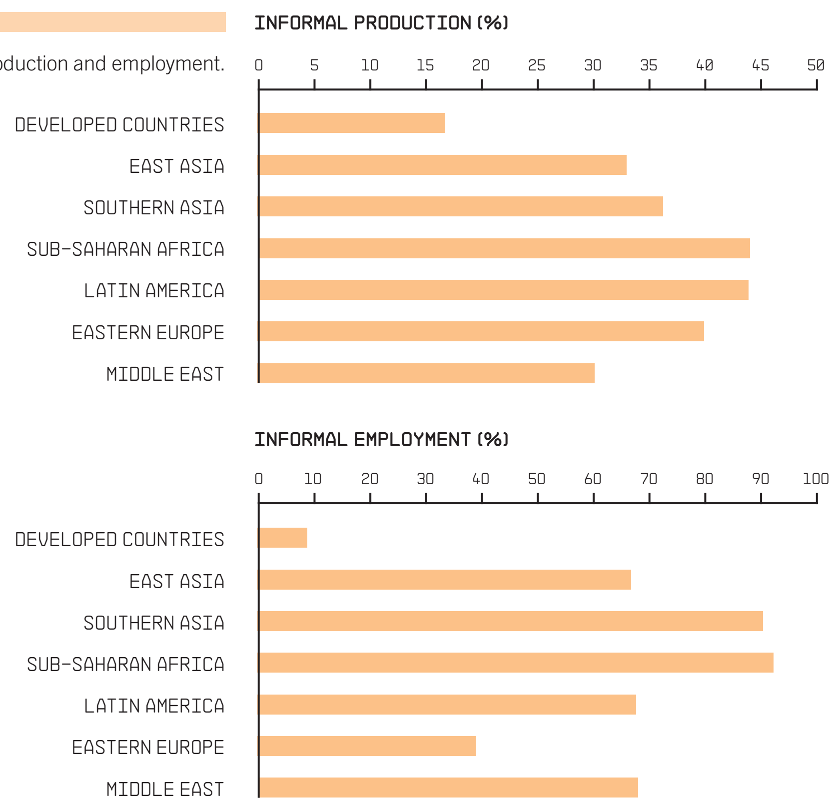
Informality as a source of risk. Fire at the Mesa Redonda Shopping Center, Lima, 2002.

legal frameworks and regulations. This definition, introduced by De Soto (1989) in his classic study, has become very popular due to its conceptual rigor, which permits a focus on the core causes of informality rather than just its symptoms. Informality entails evading taxes and regulations as well as the absence of protection and services that the law and the state can offer. Like two sides of the same coin, informality can be seen as a consequence of economic agents *exiting* the formal sector for cost-profit reasons, and as the *exclusion* of economic agents from formality when the latter has become overly restrictive and rigid.

In any case, informality is a fundamental characteristic of underdevelopment and is better understood as a complex and multifaceted phenomenon. It is determined by both the models of socioeconomic organization of economies moving towards modernity, and the relation the state establishes with private agents through regulations, supervision, and the provision of public services. Informality is not only a reflection of underdevelopment, it can also be a source of greater economic backwardness. It implies the inadequate distribution of resources and entails losing the advantages of legality, including police and judicial protection, access to formal credit institutions, and participation in international markets.

GRAPHIC 1

Informality in production and employment.



MEASURING INFORMALITY

Defining informality can be straightforward and precise, but measuring it is not. Inasmuch as it is identified with activities outside the legal and regulatory framework, informality is best described as a latent variable that cannot be observed directly. In other words, informality cannot be precisely or dependably measured, but an approximate measurement can be made using indicators of its different aspects. In that sense, we will consider two of those indicators here as we have data on them for a relatively large number of countries. Taken separately, each of these indicators offers conceptual drawbacks in its capacity to represent informality, but together they constitute a solid approach to the subject.

The most-recognized indicator of informal productive activity is the Schneider index of informality. It combines the DYMIMIC (dynamic multiple-indicators multiple causes) model, the physical input method (electricity, for example), and the excessive-money-demand focus to generate an estimate of the part of production not declared to fiscal authorities or regulators. The most-used indicator of informal employment is related to the lack of retirement pension insurance coverage. Specifically, this is measured as the fraction of the workforce that does not contribute to a retirement pension plan as determined by the International Labor Organization and the World Bank. As could be expected, measurements of productive and labor informality are interrelated, as is reflected in a statistical correlation coefficient of around 70% in a worldwide sampling of countries.

By using these data as indicators, we can evaluate the presence and extent of the informal sector in various countries and world regions. To summarize, graphic 1 shows that the degree of productive and labor informality in underdeveloped countries is much greater than in advanced countries. Sub-Saharan Africa is where informality reaches its most alarming levels, with 45% of production and 90% of employment in the informal sector. The Middle East and East Asia have similar levels of informality, with 30% of production and approximately 65% of employment in the informal sector. Southern Asia has comparable figures with regard to informal production, but its informal employment is closer to that of sub-Saharan Africa. Latin America is at an intermediate level, with informal employment figures similar to those of Eastern Asia and the Middle East, and informal production close to that of sub-Saharan Africa. Finally, Eastern Europe has a certain balance between its fractions of informal production and employment (both around 40%), which places it about halfway between underdeveloped and advanced countries.

WHY SHOULD WE BE CONCERNED ABOUT INFORMALITY?

Informality is the distorted way for an excessively regulated economy to respond to both the vicissitudes it faces and its potential for growth. It is a distorted response because informality implies a deficient assignment of resources that leads to an at least partial loss of the advantages offered by legality: police and judicial protection, access to formal credit, and the capacity to participate in international markets. In trying to elude state control, many informal companies are forced to maintain a smaller-than-ideal size, to acquire and distribute goods and services through irregular channels, and to constantly use their own resources to hide their activities or bribe public employees.

Additionally, informality induces formal companies to make more intensive use of those resources least affected by the normative regime. For developing countries, in particular, this signifies that formal companies have a less-intensive use of their workforce than they should, given their country's available resources. Finally, the informal sector generates a negative external effect that is added to their adverse influence on efficiency: informal activities use and clog the public infrastructure without contributing to the tax income needed to maintain it. Given that the public infrastructure complements the contribution of private capital in the production process, the existence of a large informal sector implies less growth of productivity (see: Loayza 1996).

Compared to what would be the optimum economic response, the expansion of the informal sector often constitutes distorted and insufficient economic growth. This affirmation needs to be clarified: informality is less than optimum in an economy without excessive regulation that provides adequate public services. However, it is unquestionably preferable to a totally formal but stagnant economy unable to escape the rigidity imposed by its own regulation.

The effect this has on policies is unquestionable: the formalization mechanism is of the utmost importance because of its consequences for employment, efficiency, and economic growth. If formalization depends mainly on the enforcement of norms, it will most likely generate unemployment and low growth. If, on the other hand, the formalization process is supported by improvements in both the legal framework and the quality and availability of public services, it will generate a more efficient use of resources and greater growth.

From a statistical standpoint, the ambiguous effect of formalization brings out a significant difficulty in evaluating informality's impact on economic growth: two countries may have the same degree of informality, but their underlying causes may be different, and so their respective growth rates may also be significantly different. Countries in which informality is kept down by the drastic application of law will have more difficulties than those in which informality is low because regulations are less strictly applied but public services are adequate.

We will now present a statistical analysis of the effect of informality on economic growth. As was suggested above, this analysis must track the application of law and a simple though highly disputable method of doing so is to include a variable that represents the state's overall capacity as a control variable. To do so, we will use the per capita GNP as an additional explanatory variable in the measurement of informality. Another important consideration for this statistical analysis is that informality may not only affect economic growth; it may also be affected by it. In order to corroborate the effect of informality on growth it is necessary to isolate informality's exogenous variation. This is done using the econometric method of instrumental variables in which instruments are chosen on the basis of variables postulated as determinants of informality: indicators of public order, business freedom, educational achievement, and sociodemographic factors (given that some of them are related to the independent economic growth of informality, we will only use as instruments those sets of variables that comply with the exclusion restriction, according to Hansen's statistical test).

Table 1 shows the results of the regression. The dependent variable (that is, the one to be explained) is the average growth of the per capita GNP between 1985 and 2005. We chose a period of approximately 20 years for the measurement of average growth in order to find an intermediate point between purely cyclical short-term growth (which would not be affected by

THE OBJECTIVE IS TO UNDERSTAND WHAT CAN BE DONE TO BRING THE INFORMAL SECTOR TO FULL LEGALITY AND WHAT ROLE THE OPPORTUNITIES AND CHALLENGES OF GLOBALIZATION CAN PLAY IN THAT PROCESS.

	(1)	(2)
INITIAL PER CAPITA GNP ($ FROM 2000, 1985, IN LOGARITHMS)	−0.6796*** (3.06)	−1.7200*** (2.95)
INFORMAL PRODUCTION: SCHNEIDER INDEX (PERCENTAGE OF THE GNP)	−0.1479*** (4.39)	
INFORMAL EMPLOYMENT: NON-CONTRIBUTORS TO PENSIONS (PERCENTAGE OF THE WORKFORCE)		−0.0872*** (3.39)
CONSTANT	11.8634*** (4.29)	19.8890*** (3.33)
NUMBER OF OBSERVATIONS	84	68
HANSEN'S J STATISTIC (VALUE p)	0.48	0.70

TABLE 1

The effect of informality on economic growth.

NOTES: Dependent variable: growth of the country's average per capita GNP, 1985–2005. The statistics t (indicators of statistical significance) are shown in parenthesis beneath the corresponding coefficients. Regressions are estimated using the instrumental variables method in order to isolate the causal effect of informality on economic growth. In this method: (1) endogenous variable: each of the two informality indexes; (2) instruments: public order, regulatory freedom in business, and average number of years of schooling.

*, ** and *** indicate a statistical significance of 10, 5, and 1% error, respectively.

informality) and very-long-term growth (which could be confused with the causes, rather than the consequences, of informality). As mentioned earlier, we are taking the initial per capita GNP as a control variable. The interesting explanatory variables are the two informality indicators, analyzed separately.

The results of statistical analysis clearly indicate that an increase in informality leads to a reduction in economic growth. The indicators of informal production and employment have negative coefficients that are very significant in statistical terms. Informality's harmful effect on growth is not only solid and significant; its magnitude also makes it important economically. According to the estimates obtained, an increase in any of the informality indicators equivalent to a standard deviation in the distribution of the sample produces a drop of 1.5 to 2 percentage points in the growth rate of the per capital GNP.

THE BASIC CAUSES OF INFORMALITY

Informality is a fundamental characteristic of underdevelopment whose emergence is linked to both the forms of socio-economic organization adopted by economies moving towards modernity and the relation the state establishes with private agents via regulations, oversight, and the provision of public services. As such, informality is better understood as a complex and multifaceted phenomenon.

Informality arises when the cost of functioning within a country's legal and regulatory framework outweighs the benefits. Formality includes the cost of becoming formal (in the form of extensive, costly, and complex registration procedures) and the cost of remaining so (including taxes, providing social security and remunerations to workers in compliance with current legislation, and obeying environmental and health laws, among other expenses). The benefits of formality potentially include police protection against crime and abuse, recourse to the judicial system for conflict resolution and the fulfilling of contractual obligations, access to legally constituted financial institutions to obtain credit and diversify risk, and the possibility of access to national and international markets. Formality also eliminates, at least in principle, the need to pay bribes and it helps to avoid fines and penalizations, to which informal companies are continually subject. Therefore, informality is more frequent when the regulatory framework is burdensome, the quality of government services to formal companies is deficient, and the state's capacity for oversight and enforcement is weak.

These cost-benefit considerations are affected by the structural characteristics of underdevelopment, specifically those related to educational performance, productive structure, and demographic tendencies. Greater schooling reduces informality by increasing labor productivity, which in turn makes labor legislation less restrictive and formal earnings potentially greater. Likewise, a productive structure that depends to a greater extent on primary sectors such as agriculture than on more complex industrial processes encourages informality because legal protection and contract fulfillment are less relevant and less important. Finally, a demographic make-up with more youth and rural population tends towards greater informality because supervision is more complex and costly, training processes are more complicated, and the expansion of formal public services is more problematical.

In informal discussions (and even academic ones), this integral approach is often set aside as greater emphasis is placed on specific sources to explain informality. Some focus on the insufficiency of the legal and regulatory system and the weakness of the state—as reflected by corruption, for example—while others emphasize the weight of taxes and regulations. Still others offer explanations linked to a country's social and demographic characteristics.

As was suggested above, all of these are possible and logical explanations, and there is data to back them up. Graphics 2 and 3, for example, show degrees of informality (informal production in graphic 2 and informal employment in graphic 3) with regard to indicators of the leading determinant factors of informality proposed above.

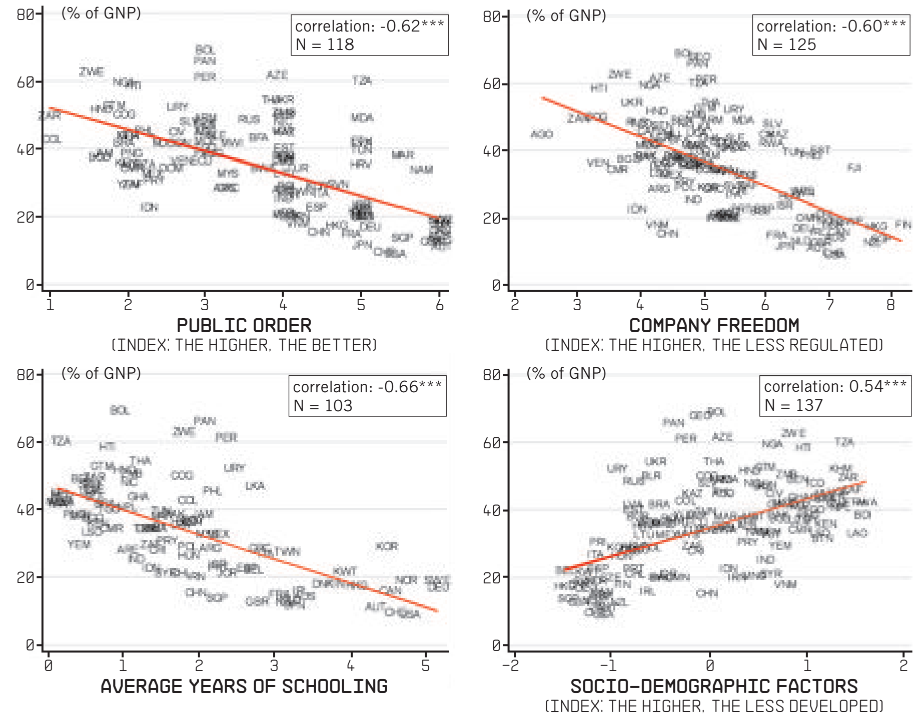
These are: an index of the preponderance of public order (obtained in PRS Group 1991) which represents both the quality of formal public services and the government's capacity to enforce its laws; an index of normative freedom in business (taken from James Gwartney *et al*. 2007), which represents the weight of restrictions imposed by the legal and regulatory framework; the average number of years of schooling of the adult population (taken from Barro and Lee 2001), which represents the education level and capacities of the workforce; and an index of socio-demographic factors (created on the basis of the World Bank's *Indicators of World Development* and data furnished by the International Labor Organization and the United Nations), which includes the percentage of youth in the population, the percentage of rural population, and the percentage of the GNP attributable to agriculture.

It is well known that the eight correlation coefficients (the two informality indexes multiplied by the four determining factors) are very significant, statistically speaking, and of great magnitude, with an average of around 0.7. The two informality indexes present the same pattern of correlations: informality is negatively related to public order, normative freedom, and schooling, and positively related to factors that indicate incipient socio-demographic transformation.

Consequently, all explanations can have some degree of truth. However, it is necessary to determine whether each of them has an independent explicative capacity with regard to informality. To do so, the following section will apply a cross-sectional statistical analysis between countries to evaluate the significance and independence of each proposed explanation when explaining informality.

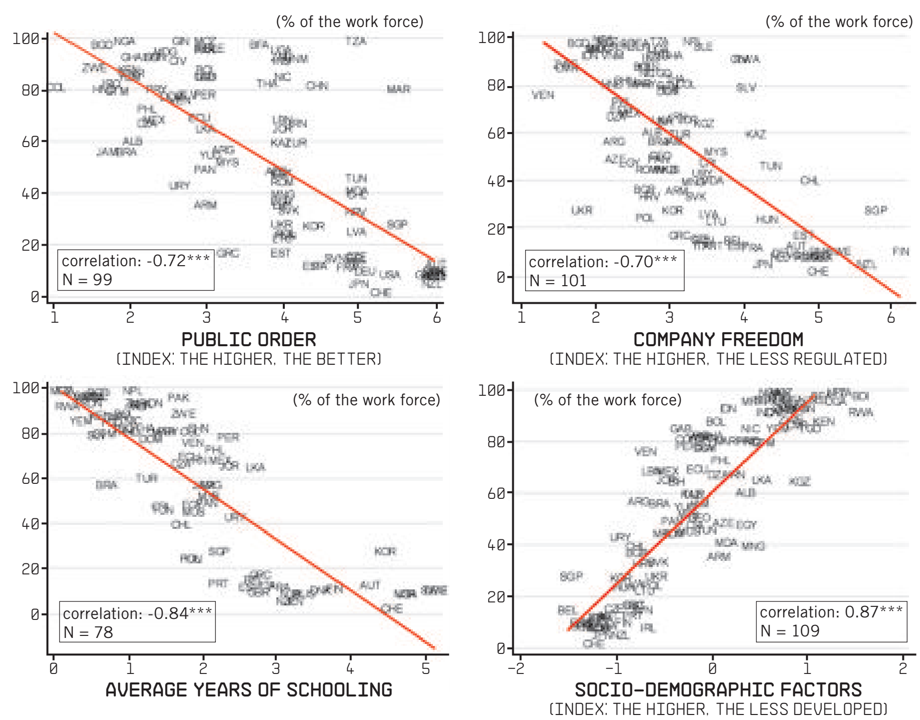
In the statistical evaluation, indicators of informal production and informal employment are treated as *dependant* variables, that is, variables to be explained. The set of explanatory variable is the same for each informality index and represents informality's leading determinant factors. These are the same variables used in the simple correlation analysis presented before.

The results of the statistical analysis are presented in table 2. Interestingly, the results are very similar for the informality indicators of both production and employment. Likewise, all of the coefficients of statistical analysis have the expected sign and are highly significant. They indicate that informality diminishes with increases in public order, normative freedom in business, and schooling. In that same sense,



GRAPHIC 2

Informal production and its basic determinants. The fraction of informal production presented on each vertical axis has been estimated using the Schneider index.



GRAPHIC 3

Informal employment and its basic determinants. The fraction of informal employment presented on each vertical axis has been estimated as a percentage of the workforce that does not contribute to social security for retirement.

EXPLANATORY VARIABLES / VARIABLES TO BE EXPLAINED	INFORMAL PRODUCTION (SCHNEIDER INDEX, PERCENTAGE OF GNP) (1)	INFORMAL EMPLOYMENT (NON-CONTRIBUTORS TO PENSIONS, PERCENTAGE OF THE WORKFORCE) (2)
PUBLIC ORDER (INDEX ON A SCALE OF 0 TO 6; THE HIGHER, THE BETTER)	−3.2360** (−2.57)	−2.9764* (−1.67)
COMPANY FREEDOM (INDEX ON A SCALE OF 0 TO 10, THE HIGHER, THE LESS REGULATION)	−2.0074* (−1.80)	−5.8675** (−2.28)
ACADEMIC PERFORMANCE (AVERAGE NUMBER OF YEARS OF SCHOOLING)	−1.9684* (−1.70)	−5.8114*** (−3.27)
SOCIO-DEMOGRAPHIC FACTORS (AVERAGE NUMBER OF YOUTHS IN THE POPULATION, PERCENTAGE RURAL POPULATION, AND PERCENTAGE OF AGRICULTURE IN THE GNP)	3.8438** (2.00)	21.6130*** (7.31)
CONSTANT	60.3429*** (10.48)	113.3110*** (11.40)
NUMBER OF OBSERVATIONS	84	70
R2	0.57	0.88

TABLE 2

Determinants of informality in production and employment.

NOTES: The statistics *t* (indicators of statistical significance) are shown in parenthesis beneath the corresponding coefficients.

*, ** and *** indicate a statistical significance of 10, 5, and 1% error, respectively.

informality diminishes when the productive structure moves away from agriculture and the demographic pressures of youth and the rural population diminish.

The fact that each explanatory variable retains its sign and meaning after being tracked for the rest of the factors indicates that there is not a single determinant factor capable of explaining informality alone. All must be taken into consideration in order to fully understand informality. Together, the four explanatory variables account for much of the cross-sectional variation between countries with regard to informality. They explain 58% of international variation in the degree of informal production and 89% in that of informal employment.

INFORMALITY AND GLOBALIZATION

Productive and labor informality are very widespread in countries with medium or low income, where they are at once a cause and consequence of underdevelopment. High informality is worrisome because it denotes inadequate use of resources (particularly human capital and labor) and an insufficient supply of government services. Therefore, informality can be a risk factor for national growth, endangering its chances of reducing poverty. Tests indicate that informality is the result of a combination of deficient provision of public services and a burdensome regulatory framework for formal companies. This combination is especially harmful when schooling and human capital are scarce, modes of production are still basic, and demographic pressures are strong.

Informality has been a very persistent characteristic of underdeveloped countries. With the advent of globalization we may wonder whether informality will finally lead to formality. There are arguments and indicators that seem to provide an affirmative response. First of all, globalization is driving international competition and states are beginning to understand that the companies in their countries cannot compete in such an environment if they cannot count on quality public services and are overwhelmed by high tax burdens and severe regulations. It is enough to mention the attitude many governments are taking towards international reports of institutional quality such as the World Bank's *Doing Business* (2009) or the World Economic Forum's *Global Competitiveness Report.* Although sometimes with great reluctance, governments are doing whatever they can to improve their status in these reports in order to encourage investment and generate jobs in their countries.

Second, informal companies are realizing that they cannot access new international markets made lucrative by globalization unless they enter the existing legal and regulatory framework. Companies seeking to participate in international markets or in advanced economies are obliged to fully comply with environmental, labor, and health regulations, among others. This has its cost but it also offers the possibility of obtaining considerable income. More than ever before, small and medium-sized export companies in non-traditional sectors such as manufacturing, agro-business, and communications services are seeking an important presence on the international economy.

Third, given the opportunities associated with globalization, individuals and families are better preparing themselves in educational terms and trying to increase their productivity. The expectations that drive them include not only a reduction of the unemployment and underemployment that have characterized developing countries for decades, but also the possibility of working in multinational corporations, export firms, international service companies, and all those companies that have sprung up and grown thanks to globalization. We can therefore expect the two large processes of social and economic integration—formalization and internationalization—to go hand in hand in the new context offered by the world economy in the 21^{st} century.

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