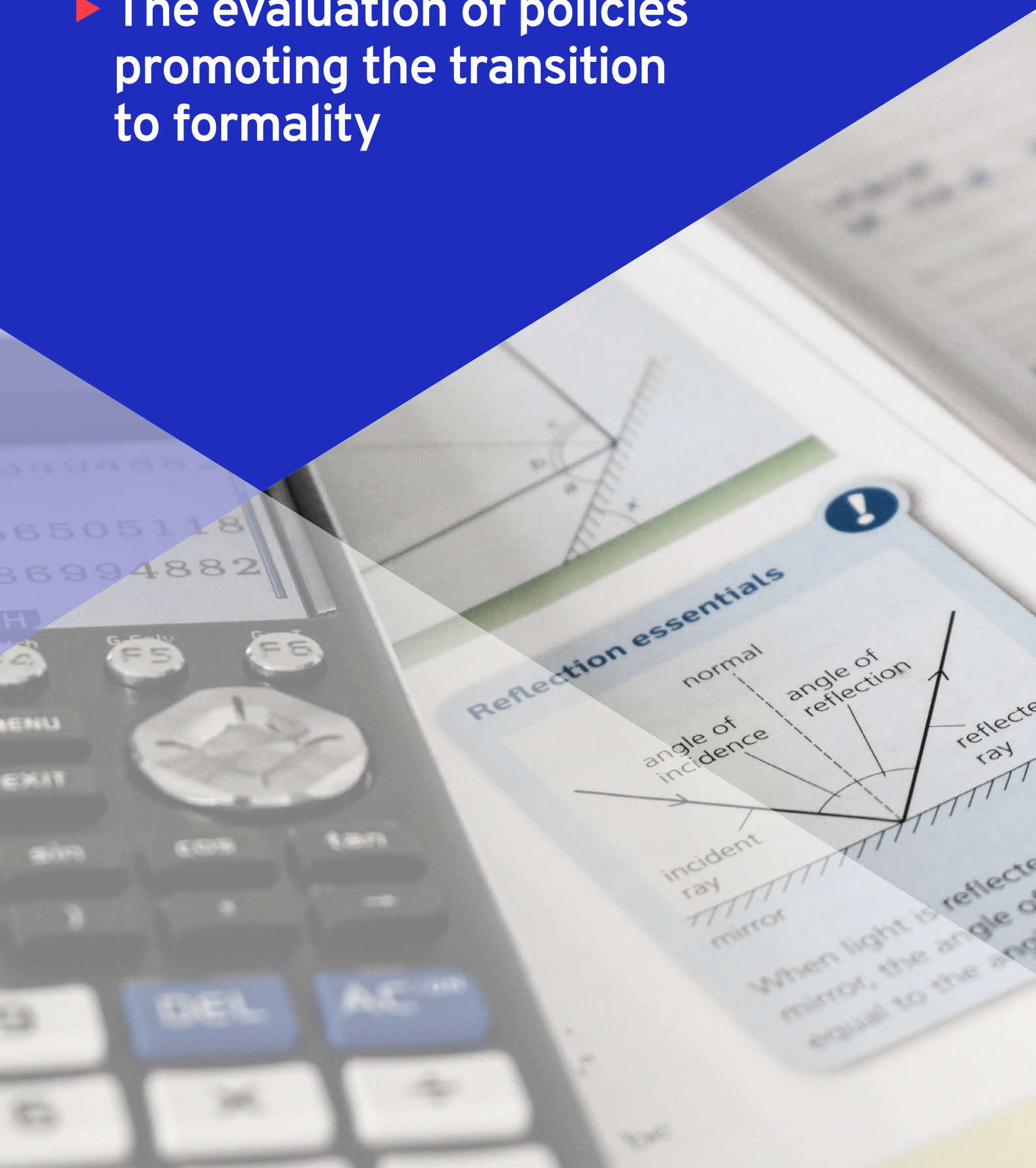




International
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► The evaluation of policies promoting the transition to formality



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Jürgen Weller

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Foreword

Over 2 billion workers around the world earn their livelihoods in the informal economy. Almost 1.6 billion of those workers have been significantly affected by the COVID-19 pandemic, leading to a sharp decline in earnings. The adoption of an International Labour Organization resolution concerning a global call to action for an inclusive, sustainable and resilient human-centred recovery from the COVID-19 crisis calls for accelerating a transition to the formal economy and highlights the important role of active labour market policies and public investment in both negatively-impacted sectors and sectors with great potential to expand decent work opportunities.

As highlighted in the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204) and demonstrated in numerous studies, business enterprise and labour informality has a wide range of negative repercussions. Informal economic units face specific challenges that impede their access to credit, markets and services, in turn hindering their productivity and revenue growth and, more generally, the sustainability of their business activities. Informal workers lack fundamental rights at work, including their rights to social protection and decent working conditions, and they often suffer wage penalties compared with formal workers. Informality affects economies and societies as a whole as it limits the scope and effectiveness of public policies, while also undermining the generation of public revenues, the development of universal social protection systems, the efficient functioning of markets and the rule of law. Recommendation No. 204 provides guidance to Members to:

- a) Facilitate the transition of workers and economic units from the informal to the formal economy, while respecting workers' fundamental rights and ensuring opportunities for income security, livelihoods and entrepreneurship;

- b) Promote the creation, preservation and sustainability of enterprises and decent jobs in the formal economy and the coherence of macroeconomic, employment, social protection and other social policies; and
- c) Prevent the informalization of formal economy jobs.

To achieve those objectives, a broad range of policies and programmes has been developed world-wide. The evaluation of those policies and programmes is a fundamental element for understanding their effectiveness. At the same time, evaluations of the effectiveness of similar policies and programmes can strengthen the policy and programme design process. Finally, factors that exacerbate informality can be identified so that appropriate policy actions can be designed to combat that phenomenon. This report provides an overview of methods for evaluating policy interventions to foster the transition to formality and highlights several aspects that should be taken into account in the design and implementation of an evaluation.

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Introduction

As highlighted in the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204) and numerous studies, business enterprise and labour informality has a wide range of negative repercussions. Informal economic units face specific challenges that impede their access to credit, markets and services, in turn hindering their productivity and revenue growth and, more generally, the sustainability of their business activities. Informal workers lack legal guarantees that ensure respect for their fundamental rights at work, including their rights to social protection and decent working conditions, and they often suffer significant wage penalties compared with workers employed in the formal sector. Informality affects economies and societies as a whole as it limits the scope and effectiveness of public policies, while also undermining the generation of public revenues, the development of universal social security systems, the efficient functioning of markets and the rule of law. Recommendation No. 204 provides guidance to Members to:

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- c) Prevent the informalization of formal economy jobs.

To achieve those objectives, a broad range of policies and programmes has been developed. The evaluation of those policies and programmes is a fundamental element for their effectiveness. As emphasized, for example, by the United Nations on Drugs and Crime (UNODC), evaluation should form part of a policy and/or programme cycle comprising strategy setting, policy/programme development, resource mobilization, implementation, and monitoring/evaluation (UNODC 2017). The outcome of an evaluation

can provide key input to relevant stakeholders, enabling them to make appropriate adjustments to the aforementioned steps or, if necessary, to make critical decisions on the direction of the overall policy or programme.

At the same time, evaluations of the effectiveness of similar policies and programmes can strengthen the policy and programme design process. Finally, factors that exacerbate informality can be identified so that appropriate policy actions can be designed to combat that phenomenon.

Formality represents an intermediate objective in development, as it can facilitate efforts to address the aforementioned challenges. An evaluation of policies and programmes designed to foster formality should focus on the following key questions:

- Does the policy or programme achieve the desired **outcome** of higher levels of formality?
- If the policy or programme achieves higher levels of formality, does this lead to a positive **impact**, such as, in the case of firms, increased access to credit, productivity and revenues or, in the case of workers, higher incomes or improved working conditions?

Evaluations to assess the impact of interventions on firm (in)formality generally concentrate on the levels of registration (the outcome), while the potential benefits of formalization (the impact) tend to receive less attention. In the case of labour formalization, a key benefit can be evaluated automatically, as it is presumed that workers entering the formal economy will gain access to the social security system. Other potential benefits, such as increased wages, are addressed less frequently (Jessen and Kluve 2021).

This report provides an overview of methods for evaluating policy interventions to foster the transition to formality and highlights several aspects that should be taken into account in the design and implementation of an evaluation. It does so on the basis of a brief analysis of the characteristics of the informal economy in emerging economies and developing countries and corresponding policy challenges.

In Chapter 1 of this report, the characteristics of informality are reviewed, with particular attention given to the origins and dynamics of that phenomenon. Mirroring the heterogeneity of informality, a comprehensive strategy and appropriate set of interventions for its reduction must be developed. Chapter 2 provides an overview of instruments that can be used to evaluate policies and programmes to promote the transition to formality, particularly those developed for countries in Africa, Asia and Latin America. The chapter discusses the strengths and weaknesses of the instruments reviewed

and the results that may be achieved through their application. Chapter 3 discusses relevant factors that should be taken into consideration in evaluations and interventions. Chapter 4 considers the impact of economic, political, social, and cultural factors on efforts to promote the transition to formality, with particular emphasis given to economic growth. Chapter 5 sets out a number of conclusions regarding the evaluation of interventions to promote formalization.

▶ 1

Informality and its heterogeneity: challenges for policy development and evaluation

1.1 The heterogeneity of informality

The well-known figure developed by Hussmanns (2004) shows that there are numerous types of informality (see figure 1).

► Figure 1. Conceptual framework: informal employment

Production units by type	Jobs 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			

- a) As defined by the Fifteenth International Conference of Labour Statisticians, convened in 1993 (excluding households that employ paid domestic workers).
- b) Households producing goods exclusively for their own final use and households employing paid domestic workers.

Notes: cells shaded in dark grey refer to jobs that, by definition, do not exist in the type of production unit in question. Cells shaded in light grey refer to formal jobs. Unshaded cells indicate the various types of informal jobs.

Informal employment: cells 1 to 6 and 8 to 10. Employment in the informal sector: cells 3 to 8.

Informal employment outside the informal sector: cells 1, 2, 9 and 10.

Source: Hussmanns (2004)

Specifically:

- Informal economic units (whose workers are mostly, but not necessarily, also informal) comprise the informal sector. Those units can be defined as “enterprises owned by individuals or households that are not constituted as separate legal entities independently of their owners, and for which no complete accounts are available that would permit a financial separation of the production activities of the enterprise from the other activities of its owner(s)” (Hussmanns 2004; International Conference of Labour Statisticians (ICLS) 2003). Those units are mostly microenterprises and own-account workers, but may also be larger-sized private firms, cooperatives, or other types of economic units operating in the social or solidarity sector.
- Informal workers mostly work in informal economic units but may also work in formal economic units or in households. They may be own-account workers, employees, contributing family workers, employers that own an informal business enterprise, or members of cooperatives or other types of economic unit operating in the social or solidarity sector. While the (in)formality of employers, own-account workers and members of cooperatives or other types of economic unit in the social or solidarity sector is defined through the (in)formality status of the corresponding economic unit, and all contributing family workers are considered to be informal, irrespective of whether they work in a formal or an informal economic unit, “employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits” (Hussmanns 2004; ICLS 2003).

The informal economy, namely the aggregate of the informal sector and informal workers outside the informal sector, thus constitutes the area in which potential action may be taken to foster the transition to formality.

Additionally, action should be taken to promote the expansion of the formal sector and prevent the informalization of existing formal jobs.

It is now widely acknowledged that the informal sector is heterogeneous in terms of the causes of informality, and in terms of the assets of informal economic units, their productivity and their relationship with formal enterprises. For example, building on previous contributions, Fields (2005) and Bacchetta, Ernst and Bustamante (2009) argue that the informal sector can be conceptualized as consisting of an upper, a lower and an intermediate tier.

The heterogeneity of the informal sector has contributed to the development of a number of theoretical approaches that focus on specific segments within that sector. In very simplified terms, the three main approaches can be summarized as follows:

The structuralist approach sees the roots of the informal sector in the structural heterogeneity of the production apparatus of developing countries, which is characterized by huge productivity gaps between different parts of the economy and weak job creation in the higher productivity (formal) sector.² Specifically, most individuals that work in low productivity activities do so because they lack access to a job in higher productivity (and better job quality) activities. Corresponding economic units are characterized by very limited capital resources, access to only simple technologies, and relatively low levels of formal education of their

2 The structuralist approach is sometimes called the “dualist approach”. However, in the dualist approach in development economics, the “lower” sector refers to the traditional pre-capitalist agricultural sector, which is characterized by very limited interaction with the modern sector, while the structuralist approach focuses on the urban informal sector, which has developed in tandem with the emergence of peripheral capitalism. This is why the term “informal sector” is preferred to “traditional sector” (Chen 2003). Some proponents of the structuralist approach have contributed to this confusion as they also characterized the “lower” sector as “traditional”, although in this case they are referring to the technology applied in economic units in that sector, and not to a pre-capitalist mode of production. The term informality is now applied to both agricultural and non-agricultural activities.

workers. The evolution of those economic units and the employment they provide is determined, primarily, by the needs of the households those workers belong to, and thus by the labour supply. Those economic units comprise the lower tier segment of the informal sector.

The legalist approach sees informal economic units directed by emerging entrepreneurs who opt for informality because of the high operating costs associated with formality. Thus, contrary to the structuralist approach, which argues that most informal workers would prefer to work in the formal economy, the legalist approach views informality as the result of a voluntary, rational decision which might be revoked if there is a change in the variables on which business owners' cost-benefit-analysis is based.

Those emerging or microentrepreneurs comprise the informal sector's upper tier segment.³ The legalist approach also argues that high labour costs are the reason for weak formal job creation in formal enterprises, and thus that high labour costs drive labour informality in both the formal and informal sectors.

Finally, **the institutional approach** sees informal economic units as inferior components of value chains dominated by formal sector firms, and informal workers as disguised dependent wage workers of those firms.⁴ Formal sector firms exploit their relationship with informal units and workers to advance their cost-cutting and flexibilization strategies. The institutional approach was originally elaborated to enhance understanding of informality in developed countries, but its scope has been extended as global value chains have grown in importance. Through the processes analysed by the institutional approach, the informal sector includes an intermediate tier.

The aforementioned approaches result in the formulation of different sets of policy recommendations. The structuralist approach focuses on measures to promote the growth of the formal sector, strengthening the productive potential of the upper tiers of the informal sector, and implementing social policy measures for the lower tier. The legal approach focuses on the formalization of economic units in the upper tiers of the informal sector through a reduction in the costs associated with formality. Meanwhile, the institutional approach focuses on enhancing labour inspections in order to strengthen compliance with relevant employment and business regulations.

Naturally, the relative importance of the three tiers of the informal sector varies across countries. The Preamble of Recommendation No. 204 acknowledges that "most people enter the informal economy not by choice but as a consequence of a lack of opportunities in the formal economy and in the absence of other means of livelihood".⁵

The concept of segmented labour markets in developing countries is being questioned for two key reasons. Firstly, there is often significant worker mobility between the formal and the informal sectors, and among the different tiers of the informal sector. However, the extent of that mobility clearly depends on individuals' particular characteristics, including their education, skills and experience, and on differences in social capital, which may help or limit individuals' access to more attractive job opportunities (Bacchetta, Ernst and Bustamante 2009). The different characteristics associated with the formal and the informal sectors result in variations in worker flows in line with changing macroeconomic circumstances. Increased flows of workers from the formal to the informal sector may, for example, take place during low growth periods or economic crises (Loayza and Rigolini, 2006).⁶

3 The ability to obtain a formal property title is a precondition for those considerations. De Soto (1986) emphasizes that many microentrepreneurs do not own a formal property title for their capital, specifically the land on which their household or economic unit is established. This frequently undermines their efforts to raise capital and can impede the formalization of their activities, as the property cannot be used as collateral.

4 In the literature, this approach sometimes is called "structuralist" which, of course, may cause confusion with the structuralist approach summarized above. Here we follow the denomination used by Cimoli, Primi, and Pugno (2006).

5 For example, Tran and La (2020) argue that, in Viet Nam, some 90 per cent of informal household businesses – the majority of the informal sector – form part of the lower tier of the informal economy and are too weak to formalize.

6 In particular, the number of own-account workers is found to behave counter-cyclically, including in Argentina (Bertranou and Maurizio 2011).

Secondly, it has been argued that a significant proportion of informal workers prefer that work modality, and that the voluntary nature of much informal employment raises doubts with regard to the argument that the informal sector comprises workers who lack access to the formal sector (Maloney 2004).⁷ However, while many informal business owners may see their current situation as an attractive option in comparison with available alternatives, two aspects should be taken into account. Firstly, the proportion of informal own-account workers, wage-earners, and unpaid family workers that prefer their current job situation to a formal job is significantly lower than for owners of informal enterprises.⁸ Secondly, an individual's preferences depend on whether or not realistic alternative options exist, given her human and social capital (Kucera and Roncolato 2008).⁹ If there is no realistic alternative income option, the choice is hardly voluntary.¹⁰ It is therefore unsurprising that research has shown that the proportion of voluntary to involuntary informality increases with increasing gross domestic product (GDP) per capita. (Mehrotra 2019).

No single indicator has been developed to measure the **formality of economic units**. Traditionally, indicators such as a national or local business registration, registration with the tax authorities or bookkeeping practices have been used to differentiate between formal and informal business enterprises. It has long been acknowledged, however, that many small firms comply with some, but not all, regulations and that, rather than a formal-informal polarity, there is a continuum from completely formal to completely informal firms, with a wide range of partially formal firms in between the two extremes (Tokman and Klein 1996; Díaz et al. 2018; Consejo Nacional de Política Económica y Social 2019; Jessen and Kluve 2021).

In view of the frequent lack of data on the compliance of business enterprises with formal regulations, proxies are often used, including

firm size (sales, revenue, number of workers), occupational categories (non-professional and non-technical own account workers as informal units/workers), and the location of the workplace.

As mentioned previously, **labour informality** tends to be concentrated in the informal sector but can also be found in the formal and household sectors. There are, moreover, many causes of informality. In some cases, labour (in)formality may be associated with the same socioeconomic considerations as the (in)formality of economic units. In the case of wage earners, employers may consider labour formality (which may generate fewer immediate benefits for business enterprises than firm formality) within the broader context of cost-benefit analysis, or the economic unit may simply generate too little revenue to cover the costs associated with labour formality. In the context of global value chains, non-standard, informal labour relations have expanded among formal sector business enterprises as they can enhance flexibility. In the case of many own-account workers, for whom the labour rights aspects of labour formality are irrelevant, they may not earn enough income to cover the costs associated with required social protection mechanisms, or she might choose a different means of protection.

Finally, beyond the common features of informality, the job quality enjoyed by informal workers differs widely. Although there are country-specific differences, informal home-based workers, unpaid contributing family workers and domestic service workers are often among the most vulnerable workers, with women often overrepresented among those highly vulnerable groups (International Labour Organization (ILO) 2018).

As can be seen in table 1, most informal jobs are in the informal sector. The proportion of informal workers in the informal sector is extremely high in Africa, the Arab States, and the Asia and Pacific regions, while it is slightly lower in Latin America and the Caribbean, where a high proportion of

7 In Viet Nam, for example, over half of household business owners are reported to prefer their current situation to any other occupational status (Pasquier-Doumer, Oudin and Nguyen 2017).

8 Farné and Vergara (2007) find that, among occupational categories in Colombia, day labourers, informal own-account workers and domestic service workers have the least job satisfaction.

9 Pasquier-Doumer, Oudin and Nguyen (2017) found that, in spite of the aforementioned preference expressed by many household business owners in Viet Nam, those same business owners do not want their children to take over their business enterprises. Furthermore, certain categories of worker have more opportunities to formalize their situation than others. For example, Ariza and Retajac (2021) demonstrated that the probability of informality among Colombian workers varies widely and depends on their personal and household circumstances.

10 Tello (2015) and Dávalos and Albuquerque-Chávez (2019), for example, found that the vast majority of Peruvian informal workers are so involuntarily.

informal workers are employed by formal sector enterprises. This is in part due to the relatively large size of the formal sector in that region

and the relatively high proportion of informality within that sector.

► **Table 1. Informal jobs by sector and country group, (percentage of total informal employment)**

	Developed countries	Emerging economies and developing countries				
		Total	Africa	Arab States	Asia and the Pacific	Latin America and the Caribbean
Informal sector	80.3	85.1	88.6	88.8	86.1	70.1
Formal sector	18.6	10.5	6.4	10.9	9.9	22.1
Household sector	1.1	4.2	5.0	0.3	3.9	7.8

Source: Author's calculations on the basis of data provided in ILO (2018)

New forms of informality have emerged in recent years in the context of new business models, including in the area of digital platforms, primarily in work relations that may be characterized as dependent contractor relationships.

The sectoral location of an informal job is particularly relevant in policy design. In the case of the informal sector, firm formalization is usually (although not necessarily) a precondition for labour formalization. Formalization strategies may focus on the transition to formality among informal economic units. In the formal sector, informal jobs imply non-compliance with social and labour laws, and labour inspections may play a key role in promoting formalization. Finally, households are not targeted by firm formalization strategies, so that specific policies to promote labour formalization in that area must be developed.

As it has already been mentioned, the main indicator used in the identification of labour formality is the payment of job-related social security contributions.¹¹ However, that indicator does not cover (non-)compliance with labour regulations, so alternative indicators, normally related to a formal, written contract, may be used, including paid annual leave or paid sick

leave (ILO 2018). If a set of indicators on labour formality is applied, a range emerges, with total formality and total informality as the extremes and partial formality combinations in between. These considerations have consequences for formalization policies and their evaluation which should be guided by the following questions:

- Is the heterogeneity of the informal sector and informal employment taken into account? Is the target group of the intervention and its evaluation clearly defined?
- What is the objective of the intervention?
- Which is/are the outcome variable(s) that can be used to measure the corresponding change?
- Is the possibility of differentiated outcomes for different segments of the target group (disaggregated, for example, by sex or age group) taken into consideration?
- Is the possibility of differentiated longer-term outcomes taken into consideration?
- Has formalization had a positive impact on firms' performance and/or workers' well-being?

¹¹ It is also possible to define the labour formality of employers, own-account workers, and members of producers' cooperatives using this criterion, which would broaden its range to (near) universality.

1.2 Policy challenges in the transition to formality

In view of the heterogeneity of the origin and the characteristics of firm and labour informality, fostering the transition to formality necessarily requires a diverse but integrated set of policy instruments (Islam and Lapeyre 2020).

In ILO (2014) a brief overview of interventions to achieve that objective is presented. Those interventions are organized broadly by four types of policies (policies for productivity growth; regulatory (legal) measures; incentives; and interventions to strengthen oversight). Together, they articulate a comprehensive policy approach for fostering the transition to formality.

Most of those policies relate, more or less directly, to one of the aforementioned theoretical approaches on informality. Specifically, the following policy pillars emerge:

- If the size of the informal sector (in developing countries) is determined mainly by the limited labour demand of the formal sector and the labour supply pressure stemming from the needs of low-income households, and if informal economic units are unlikely to be formalized due to their low productivity and revenue (structural heterogeneity), central policy advice refers to instruments that foster economic growth. In that case, particular attention could be given, *inter alia*, to labour-intensive activities and technologies, thus increasing labour demand in the formal sector. Another key policy area would be productive development programmes that improve productivity (and thus formalization options), especially for economic units in the upper tier of the informal sector. In this context, particular emphasis is placed on instruments to foster the emergence of favourable macroeconomic conditions, a structural change to high value-added and labour-intensive activities, inclusive human capital strategies that enable the labour force to acquire capabilities required to take advantage of productive opportunities, sectoral and regional development strategies, and enterprise promotion strategies to promote the development of micro-, small and medium-sized business enterprises.

- If the high cost of formality (both in financial terms and in terms of excessive red tape) hinders the transition of economic units to formality, instruments that improve cost-benefit relationships while focusing on cost reduction embody the core of policy advice which would be centered on norms and incentives. The simplification of bureaucratic procedures, including those related to business registration, taxation and social security, and a reduction in the costs of those procedures are the main instruments that emerge under that approach. Access to relevant information on formality and formalization is key. Occasionally, special conditions of formality are created through laws that cover specific sectors, groups of workers or new business enterprises (start-ups).
- If informality is viewed, primarily, as the result of capital accumulation strategies that take advantage of the lower costs and higher flexibility of informal economic units and informal workers, adequate oversight plays a key role in efforts to promote formality. This requires the strengthening of labour inspection institutions with priority given to ensuring future compliance rather than to sanctioning past illegal behaviour, and the design of instruments that promote a culture of compliance with the rules and regulations that underpin formality. Leveraging information and communications technologies (ICT) can increase the effectiveness of those efforts (e-formalization).¹²

Naturally, linkages among the three theoretical approaches and certain policy areas do not mean that other interventions are irrelevant. In particular, recognition of the heterogeneity of the informal economy helps to underscore the need for a diverse set of instruments. From the cost-benefit analysis perspective, for example, it might be recognized that the relationship between costs and benefits differs for economic units in different tiers of the informal sector. From the structuralist perspective, it may be recognized that, in addition to efforts to expand the scope of the formal sector and reduce productivity gaps, appropriate incentives for formalization, developed in line with the characteristics of economic units in the different tiers of the informal sector, can foster

¹² E-formalization can also contribute to progress in other policy areas, particularly through the simplification and acceleration of administrative procedures. On the potential impact of e-formalization see Chacaltana, Leung and Lee (2018) and Kring and Leung (2021). Olivera (2022) reviews five e-formalization initiatives introduced in Colombia, which adopt a multidimensional approach in order to promote firm and labour formality.

firms' productive development (Deelen and Henríquez Amestoy 2018).

Certainly, given the heterogeneity of origin and characteristics of informality, a strategy to achieve a significant reduction in the proportion of informal economic units and jobs must adopt an integrated approach that tackles various aspects of the problem. Specifically, Recommendation No. 204 proposes an integrated policy framework, to be included in national development strategies and plans, which should cover a broad set of policy measures that tackle different aspects of informality.

The three broad means to reduce informality (transition to formality, creation of formal enterprises and jobs, and prevention of the informalization of existing formal jobs) are relevant in all countries, regardless of their income levels. However, the composition of informal employment suggests that there are priority fields of action in low-, middle- and high-income countries, as a strategy to foster the transition to formality must take into account the specific circumstances in each country. Table 2 shows the composition informal employment, by category of employment, for different country groups.

► **Table 2. Composition of informal employment, by category of employment and country group** (percentage of total informal employment)

	Developed countries	Emerging economies and developing countries				
		Total	Africa	Arab States	Asia and the Pacific	Latin America and the Caribbean
Employees	51.3	35.4	29.7	54.2	34.1	45.1
Employers	6.5	2.5	2.7	4.8	2.2	3.9
Own- account workers	35.9	45.5	50.1	39.3	45.7	43.2
Contributing family workers	6.3	16.6	17.6	1.6	17.9	7.8

Source: Author's calculations on the basis of data provided in ILO (2018)

Table 2 shows that, in developed countries, most informal workers work for economic units with wage relationships (as employees or employers). Of the 57.8 per cent of informal workers in those categories, a large majority work in the informal sector, while less than 20 per cent of informal workers work in the formal sector. The latter figure is, however, still higher than the corresponding percentage in emerging and developing countries. Developed countries are characterized by a surprisingly high percentage of informal employers. At the same time, about a third of informal jobs in those countries correspond to jobs performed by own-account workers. In those countries, policy priorities for

the transition to formality should therefore be:

- The formalization of existing informal enterprises (in which workers are subject to wage relationships or work as own- account workers);
- The formalization of existing informal wage jobs and the corresponding registration of the workers performing those jobs. This should include informal wage jobs in firms operating in the formal economy;
- Combating the surge in new informal jobs, for example, in the context of new business models.

In emerging economies and developing countries, an even higher proportion of informal jobs are found in the informal sector. Most of those jobs correspond to household-based activities, and the sum of own-account workers and contributing family workers exceeds 60 per cent.¹³ However, as has been discussed previously, a significant proportion of those workers are likely to work in the lower tier of the informal sector, with very few opportunities for formalization. In general, those countries are characterized by a relatively heterogeneous productive structure, so that sector-specific instruments may be needed to complement broader rules and regulations, including, for example, in agriculture and domestic service.

In addition, those countries tend to have a relatively low number of firms with wage relationships, which hinders the creation of formal jobs.¹⁴ Informality is, moreover, also high among firms with wage workers.¹⁵

The priorities of formalization policies in emerging economies and developing countries should therefore be:

- The formalization of enterprises in the upper tier of the informal sector;
- The creation of new enterprises and jobs in the formal economy.

There are, however, often significant differences among country groups. In Africa, for example, high levels of informality are generally seen as part of broader development problems and must be tackled in an integrated manner. As a majority

of jobs are informal, most specific formalization interventions are unlikely to have a significant impact if they are not implemented in tandem with complementary actions that strengthen enterprises' capabilities. It should also be emphasized that broader economic development is key to increasing formality (Kiaga and Leung 2020; Chacaltana and Leung 2020). It must also be noted that in many emerging economies and developing countries a large proportion of informal jobs are in small-scale agriculture, an economic area in which workers face a number of specific challenges related to rural development.¹⁶

In middle-income countries, the relatively high proportion of informal workers in the formal sector (in Latin America and the Caribbean, for example, that figure is 22 per cent, a figure that is even higher than in the developed countries group),) underscores that priority must also be given to addressing informality in enterprises operating in the formal economy. Attention could, for example, be given to fostering innovations in and strengthening labour inspection mechanisms, and the updating of regulations so that they are relevant to emerging types of labour relations (Bueno 2018). In addition, the costs of formality should be reviewed in order to identify potential obstacles impeding the formalization of firms in the upper tier of the informal sector. In that context, private business associations can play a relevant role, as they are aware of sector-specific characteristics that must be considered in a formalization strategy, and they can facilitate access to business enterprises, particularly among upper-tier informal sector firms.¹⁷

13 An exception is the Arab Region, where nearly 60 per cent of informal workers are employees or employers. In that context, it should be noted that more than fifty per cent of working persons in that country group work in high-income countries.

14 The proportion of employers among working persons varies from 1.8 per cent in low-income countries to 2.6 per cent in middle- and 3.2 per cent in high-income countries. (Author's calculation on the basis of figures contained in the ILOSTAT labour statistics database).

15 In emerging economies and developing countries, 55 per cent of employers are informal (the figure ranges from 42 per cent in Latin America and the Caribbean to 78 per cent in Africa), while in developed countries this is the case for some 29 per cent of employers (ILO 2018).

16 In Africa, for example, informal jobs account for 71.9 per cent of non-agricultural employment, but 85.8 per cent of total employment. That significant discrepancy is due to the fact that 97.9 per cent of agricultural jobs are informal while the agricultural sector accounts for around half of total employment (ILO 2018).

17 Chacaltana and Leung (2020) present a summary of regional approaches on transition to formality for Africa, Asia, and Latin America and the Caribbean.



2

Methods for evaluating formalization policies

In this section, we review the methods that can be used in the analysis of policies on formalization. Potential methods range from simply counting the number of formal firms or workers (more of a monitoring exercise than an evaluation) to evaluations in the strict sense of the term that aim to establish a causal link between a specific intervention and a measured outcome and its impact.

Another relevant difference relates to the types of policy evaluated: while some exercises evaluate the results of policies whose main goal is to foster the transition to formality, in other cases the evaluated policies aim to achieve different objectives, although it is assumed that those policies will have a differentiated impact on formal and informal economic units and jobs.

We review potential evaluation methods and assess their strengths and weaknesses. Research examples are given to illustrate how each method can be used in practice.¹⁸ The review begins with instruments that generate relevant information

on (in)formality and its evolution, then turns to methods that analyse factors that influence the levels of (in)formality and closes with methods that can be used to ascertain the outcomes and impact of policy interventions or other external factors on formality and, in some cases, firm performance and worker well-being.

2.1 Registration

The simplest way to measure the results of a specific policy is to establish a formalization goal for a given period and verify at the end of the period to which degree that goal has been accomplished. That goal may be a specific number of economic units registered with the tax authority or workers registered with the relevant social security institution. In Colombia, for example, the tax authorities expected the formalization of some 500,000 enterprises as a consequence of the application of measures designed to simplify the formalization process and reduce associated costs (Farné, 2021).

¹⁸ More detailed examples are presented for three selected methods in the annex to the present report.

That method is the cheapest to adopt, as the only instrument required, namely the corresponding register, already exists and is updated on a regular basis.

The key disadvantage is that no causality between a policy measure and a change in registration data can be established. Indeed, other factors may have an impact on formality and reinforce the outcome of the analysed measure, which thus may be overestimated. At the same time, other factors that were relevant in the period of analysis may have had an opposite effect, and the outcome of the corresponding instrument may be underestimated.¹⁹ Another weakness of the method is that it does not provide for a distinction to be made between new firms and jobs that were created as formal at the onset, and others that were established on an informal basis and were later registered with the authorities during a specific period of time.

2.2 Satellite accounts

Satellite accounts are an extension of the standard national accounts and can be used to monitor and evaluate activities addressed in the core versions of national accounts in too aggregate a manner. Originally, they were developed to cover fields such as education, the health sector, tourism, culture, and environmental protection. Those instruments have, however, also been used to analyse fields normally not covered by national accounts, such as unpaid household work or other forms of unpaid labour (European Commission et al. 2009).

The informal sector can be separately measured by means of a satellite account, allowing stakeholders to ascertain the contribution made by the informal sector to GDP. To achieve that objective, a distinction is made in national accounts between households that carry out productive activities for the market and households that don't. As no direct causality can be established, data in that area can be used to monitor the evolution of the informal sector rather than to carry out an evaluation. If

calculations are made on a regular basis, however, ex-post information can be used in econometric exercises that establish relationships with factors that may explain changes in the informal sector's contribution to GDP. It is also possible to model the consequences for employment of changes in the national account data to which the satellite account is linked.

In Peru, the *Instituto Nacional de Estadística e Informática* (National Institute of Statistics and Information (INEI)) has developed a satellite account that identifies not only the informal sector's contribution to different components of the country's national accounts, but also the evolution of informal employment (both within and outside the informal sector, thus covering the entire informal economy). To achieve that objective, the National Institute makes use of a modified version of the employment and income module of the *Encuesta Nacional de Hogares, Sobre Condiciones de Vida y Pobreza* (National Household Survey on Living Conditions and Poverty (ENAH)) as a 1-2-3 survey (INEI 2019).²⁰

One area covered by the National Survey is the evolution of the Peruvian labour market at the national level. The Survey can thus be used to identify informally employed workers. To achieve that objective, the following criteria are applied:

- Employees without employer-financed contributions to a social security system;²¹
- All unpaid family workers, regardless of the characteristics of the production unit they are working for;
- Employers and own-account workers whose economic unit belongs to the informal sector.

Independent informal workers (employers and own-account workers) outside the agricultural sector are surveyed, additionally, in step 2 of the survey.²² Considering the high rotation among informal independent workers, this second step module is applied at the same time as the employment and income module of the National Survey. That module collects data on key characteristics of the economic unit, namely

19 For example, Farné (2021) found that, when the cost of job formality in Colombia was reduced to stimulate formalization, simultaneous measures that made capital investment cheaper and a relatively large increase of the minimum wage had an opposite effect on formalization. Consequently, it was not possible to ascertain the “real” effect of legislation enacted to promote formalization simply by observing the evolution of registered jobs.

20 See Chapter 3 for an overview of the characteristics of this type of survey.

21 This criterion is applied only to workers in the formal sector, as all employees of informal sector economic units are considered informal.

22 Economic units in extractive activities (especially agriculture) which belong to the household sector (as defined in national accounts) are all considered informal.

income, self-supply with and spending on production, trade and service activities and other expenditures, as well as key characteristics of workers.

The data obtained is combined with data originating from national accounts on:²³

- Production accounts by activity, production segment, and institutional sector;
- An employment matrix by category of occupation, activity, production segment, and institutional sector.

A calculation is thus made of the number of informal economic units and the participation of the informal sector in different national account items, including the contribution of the informal sector to GDP and to value added in different economic activities, in addition to labour productivity. Additionally, a broad set of data on the characteristics of informal sector units and their owners can be produced.

While this method cannot establish direct causality in the evolution of the informal sector and informal employment or the impact of specific policy measures, it is a powerful instrument for the generation of relevant information, which is useful per se and may, additionally, be used as input for further analysis. It covers the informal sector and informal employment outside the informal sector in a coherent manner on the basis of the same data sources. Although the measurement of both components is undertaken on the basis of legal definitions, the data facilitate additional analysis of heterogeneity in the informal sector. For example, the available data on labour productivity can be used to identify strata within the informal sector, which may be related to other information on specific economic units and their owners.

A main weakness of the method, besides the aforementioned impossibility of establishing causalities, is that household survey samples are based on population censuses, while the distribution of economic units may necessitate an economic census to obtain the data needed to elaborate a corresponding representative sample of economic units.²⁴

2.3 Decomposition exercises

The aggregate labour (in)formality rate is a product of the (in)formality rate on a disaggregate level of employment and the relative weight of those disaggregate categories. For example, employees in the public sector and in medium-sized and large private enterprises tend to show higher formality rates than own-account workers and domestic service workers. Thus, the aggregate formality rate may rise as a result of the “between-effect” with an increase in the first group of workers (even without successful formalization policies that improve that rate in any of those occupation categories), or as a result of the “within-effect” if formality rises within some or all of the various categories (even without a more than proportional expansion of high-formality categories).

Following that logic, country studies on Colombia and Peru included in Salazar-Xirinachs and Chacaltana (2018) present a decomposition analysis of the change of the aggregate formality rate, differentiating the within- and the between-effect for various economic sectors.

Decomposition of the variation of the aggregate (in)formality rate may be a first step in the evaluation of policies that foster the transition to formality. Specifically, it may provide insights into the extent to which a structural change stemming from the growth of higher value-added activities or an increase in the number of higher productivity jobs has increased formality. On the other hand, in those exercises the within-effect remains a “black box”, as the changes of the formality rate on a disaggregate level may have multiple origins.

2.4 Small area analysis

It is difficult to analyse labour informality for subnational territories, as traditional sources do not often generate statistically significant data at that level of disaggregation. To address that problem, a method for the estimation of social data for small areas can be developed, in which population census information is combined with household survey data (Espejo 2022). The first part of that method involves the use of household survey data to analyse which factors are highly

²³ Data collected in the context of national accounts can also be used to correct sub-declarations of income and compensate for data gaps occurring as a result of the limited coverage of surveys (Séruzier 2011).

²⁴ An economic census may not, however, cover all economic units as it may not be possible to identify all activities with no stable workplace or activities that are mixed in with household activities.

correlated with labour informality (using variables such as sex, age, rural/urban dwelling, years of education, branch of activity, and category of occupation). Using a two-step probit model, the probability is estimated, firstly, that a person is working and secondly, that her job is informal. That information is applied to census data on a disaggregated territorial level, where labour informality is estimated for small areas.

This method has been applied to Argentina, Chile, Mexico and Peru.²⁵ It permits the identification of “informality hotspots” and may serve as valuable input for territorially-focused policy measures. On the other hand, as this method uses census data, no frequent updates are possible, and the impact of interventions cannot be determined.

2.5 Qualitative information surveys

If we are interested in knowing the factors that might incentive the owners of informal economic units to transit to formality, one option might be to just ask them. To do that, enterprise surveys can be used to collect quantitative data on firm characteristics and qualitative information on experiences, preferences, and attitudes of informal business owners. Such surveys are *ex-ante* exercises that can inform policy decisions on measures to promote formality.²⁶ The information generated by the surveys may be subject to different statistical procedures, including the identification of correlations among qualitative and quantitative data.

For example, Coolidge and Ilic (2009) reported the results of two qualitative surveys of formal and informal small businesses in South Africa.²⁷ The main issue investigated was tax compliance and the potential advantages of registering with the tax authorities. The survey questions focused primarily on aspects of transition to formality (among formal firms that had previously operated in the informal economy for some time, and among informal firms that might consider registration with the tax authorities) in order to identify factors that correlate with increased likelihood of registration, such as an enhanced understanding of the disadvantages

of non-registration and the potential advantages of registration.

In Viet Nam, a 1-2-3-survey was developed to deepen understanding of the informal sector. While step 2 of the survey, which was designed for owners and/or managers of informal household enterprises, included mostly quantitative questions, it also contained qualitative ones, particularly regarding the determinants of registration (Cling, Razafindrakoto and Roubaud 2012). Additionally, some researchers who participated in the design of the questionnaire conducted a limited number of complementary qualitative interviews with household business owners in order to gain further insight into the reasons for (non-)registration and their views on the implications of formalization.

In Mongolia, a special survey was carried out among 3000 informal workers in different employment categories in order to identify the characteristics of and reasons for informal employment (ILO 2021).²⁸ The quantitative data obtained were complemented by qualitative data obtained by means of questions designed to ascertain survey participants’ views on, *inter alia*, the benefits and disadvantages of formalization, the information made available to them, and potential incentives and support that could encourage formalization. In addition to the survey, information on informality, employment policies and other relevant issues was gathered in expert focus groups, which was then compared to the information provided by survey participants.

Rothenberg et al. (2016) reported the characteristics of a qualitative survey among 192 small and medium-sized business enterprises in Indonesia, which was carried out, *inter alia*, to identify the challenges those firms face, the impact of government programmes, and the reasons for the non-registration of informal businesses in the country.

Qualitative surveys, in combination with quantitative data on relevant economic units, facilitate the identification of policy-relevant issues for the transition to formality. For example, if firms that already use bookkeeping report a higher probability of formalization, activities to support informal firms might include the

²⁵ See Espejo (2022) and the country studies cited there.

²⁶ They can also be *ex-post* exercises if formalized firms are surveyed about the reasons for their formalization and their experience with regard to their change of status.

²⁷ The smallest units were excluded from the survey on informal businesses.

²⁸ In addition, information was gathered on the impact of the COVID-19 pandemic on informal employment and the role of government support programmes during the emergency.

introduction of bookkeeping not only as a way to improve business enterprise management, but also as a cost-effective measure to encourage informal sector firms to formalize their status after raising their awareness of the advantages of taking that step. If the avoidance of corruption is reported as a potential advantage of formality, steps should be taken to ensure that formal firms are better able to withstand corrupt practices, and that clear channels of complaint are available to report any attempts to illegally obtain financial payments from business owners. Another advantage of qualitative surveys is that, as the sample range can be adjusted to take into account issues of particular interest, survey samples can be designed to ensure that the survey takes into account the considerable heterogeneity of informal firms.

On the flipside, key questions in qualitative surveys, including questions regarding the intention or probability of informal business enterprises to formalize their status, have certain inherent weakness, as survey participants who are aware of their illegal status may provide inaccurate answers.

2.6 Econometric analysis of survey data²⁹

Regression models can employ data of different origins to identify a relationship between a dependent variable of interest and explanatory variables. In general, the explanatory variables are selected because of a theoretical approach that establishes a causal relationship between them and the dependent variable. Strictly speaking, however, regression models establish correlations, but do not prove causality (although certain methods may strengthen arguments in favour of causal relations).³⁰

Different types of regression model can be employed to identify factors that may influence the evolution of firm and labour (in)formality.

For example, Nguyen, Verreynne and Steen (2014) and Tran and La (2020) used a set of successive small and medium-sized enterprise surveys conducted in Viet Nam to identify factors related

to (in)formality among household enterprises.³¹ Nguyen, Verreynne and Steen (2014) analysed the role that three potential drivers play in a firm's decision to formalize, namely the desire to grow and innovate, the desire to obtain access to government financial support, and the desire to avoid the payment of bribes. The researchers built a regression model with the change from informality to formality as the dependent variable. Three variables represented the three drivers. These were, respectively: the introduction of new products, processes or technologies; credits and tax reductions or exemptions; and the amount paid by business enterprises as bribes. The impact of the drivers on the probability of the transition to formality was then estimated. In addition, the authors included control variables on firm growth, firm age, firm performance, firm location, and industry by technology level.

Tran and La (2020) analysed government regulations and bribes as factors that may influence a firm's decision to formalize. To that end, they formulated an equation to identify the benefits of formalization in terms of revenue, and a broad set of control variables to take into account firm characteristics (including gender, age and the education level of the firm owner/manager), the business enterprise labour force (including the number of regular full-time employees, the share of production and service workers, and the percentage of female workers), the ownership of a certificate of land use rights, an industry dummy, location dummies, and year dummies. As firms that formalize may differ from those that chose not to do so, additionally a "switching variable" was included so that firms that formalize their pre- and post-switching situations could be analysed and compared to those of informal firms that did not switch. The net effect of formalization could thus be ascertained, without the results being influenced by differences existing between switchers and non-switchers prior to the formalization of the former. In another step that took into account the heterogeneity of informal household enterprises, the authors applied their analysis to all informal firms, and, separately, to the 10 per cent of informal firms with the highest revenue, which

29 Econometric analysis may also be applied in connection with other methods reviewed in this chapter. In this section we review the econometric analysis of data from existing databases, particularly those based on surveys, as an ex-ante exercise useful in the design of policy interventions or as academic research on (in)formality and formalization.

30 One technique that can be used to identify a certain causality is based on chronological regularities (Granger causality). Another method that can be used to establish causalities involves the use of instrument variables.

31 Cling, Razafindrakoto and Roubaud (2012) study the results of the first round of that survey, among others, with a regression analysis of the relevance of legislation, individual characteristics, and incentives to formalization.

represent the upper tier of informal economic units, as weaker enterprises tend to stay informal because of the relatively higher burden of the cost of formality.

With a second model, Tran and La (2020) analysed whether making informal payments, spending time dealing with business issues with government officials or poor knowledge of or lack of interest in tax laws influence the probability of formalization.³²

Country studies presented in the volume edited by Salazar-Xirinachs and Chacaltana (2018) on Brazil, Mexico, and Peru used regression models to identify factors that had an effect on employment formality. In a first set of exercises, national account panel information on production and productivity at the subnational level (the level of states or departments) was utilized to determine whether the composition of economic growth mattered for an increase of formality or whether it was just economic growth per se that was decisive in that regard.

Salazar-Xirinachs and Chacaltana (2018) also presented a set of multiple regression models formulated with a view to analysing the impact of various factors on the formality rate. Again, national account panel data at the subnational level were used, and among the explanatory variables, the authors included the economic growth rate, the growth in average labour productivity, the change in the participation of labour-intensive sectors in regional value added, the unemployment rate, the union affiliation rate, the labour market participation rate, an indicator for legislative measures that promote the transition to formality, and an indicator for changes in compliance with labour regulations.

Regression analysis facilitates the identification of factors that are positively or negatively correlated to (in)formality levels and can thus draw the attention of policymakers to potential areas for intervention in order to support the transition to formality. If adequate data are available, the heterogeneity of informality can be integrated into regression models, and the different characteristics and correlations can be considered for policy advice.

On the other hand, regression analysis does not provide policy makers with guidance regarding specific policy measures that should be implemented to address the obstacles that limit

formalization, or their specific impact. Finally, the quality of the results obtained depends on the quality of the underlying data, especially their representativeness and coverage.

2.7 General equilibrium models

General equilibrium models represent a given economy as a whole. They are used in ex-ante exercises to identify the possible impact on an economy of specific policy measures, such as trade, fiscal, monetary, labour and environmental policies, or exogenous changes, including technological changes and external shocks, both on standard macroeconomic variables, including GDP, investment, exports, public finances and productivity, and on related issues such as distribution.

To formulate a general equilibrium model, a set of theory-based equations that represent the structure of an economy and the behaviour and preferences of agents is elaborated. The model provides an overview of the economy in equilibrium in the base year, although, in general, market-clearing assumptions are relaxed, and it can be used to predict what a new equilibrium will look like following a specific policy intervention or economic shock. Some models can also be used to predict how the adjustment process leading to that new equilibrium is likely to proceed.

The equations are linked to a database consisting of empirical data on the economy in question. One part of that database is often a set of input-output tables or a social accounting matrix that captures the economic transactions in an economy in a specific year. Other potential information sources include economic censuses, matched employer-employee data, registers, customs data and household surveys. In addition to the values assigned to the relevant variables in a base year, the database must contain data related to the elasticities that describe the adjustment of those variables to changes in price or quantity.

The theory-based model is calibrated on the basis of the aforementioned data, with coefficients and exogenous variables estimated so that the model provides an accurate representation of the economy in the base year. Various types of general equilibrium model have been developed and the particular model used, and the particular

³² The aforementioned control variables are also used in this exercise.

data inputs needed, depend on the particular questions that need to be answered (Boeters and Savard 2011).

General equilibrium models were originally developed on the basis of neoclassical theory. Traditionally, the labour market was modelled as homogeneous and competitive, and aspects such as involuntary unemployment and segmentation were rarely considered. However, certain questions to be answered through a general equilibrium model require a more differentiated approach to the characteristics of labour market supply and demand and of how that market functions (Boeters and Savard 2011). As a result, it has been necessary to re-examine the assumptions made in neoclassical theory.

For example, instead of the assumption of a homogeneous labour force and a particular representative household, differentiations relating to the labour supply, including urban-rural and gender or age differences, differences among skill groups, households of different compositions or income levels, as well as sectoral employment and the distinction between formal and informal workers, have been incorporated into more recent models. To that end, the macro-model may be combined with microsimulations based on information generated by household surveys (Cockburn, Savard and Tiberti 2015).³³

At the same time, a distinction may be made between the formal and informal sector in production, particularly when challenges such as the need to estimate the valued added generated by both sectors and the modelling of labour migration between the sectors must be resolved.³⁴

Below we provide examples of general equilibrium models that take into account the segmentation of the production structure and labour markets of developing countries.

Agénor et al. (2007) developed a general equilibrium model calibrated to the economic structure of a number of Middle East and North

African countries with an urban production sector divided into a formal and an informal segment. The authors distinguished two skill groups, namely skilled individuals working exclusively in the urban formal sector, and the unskilled, who may work in the rural economy, the formal private sector or in the urban informal sector. The authors analysed the impact of a series of specific labour market reforms (a reduction in payroll taxes, cuts in public sector wages and employment, an increase in employment subsidies, and a reduction in trade union bargaining power) and a composite reform programme that combined several of those interventions. They reviewed different scenarios in which different fiscal policies addressed a loss of revenue provoked by some of those policies. Those scenarios could be used to identify indirect effects.³⁵

Davies and Thurlow (2009) developed a general equilibrium model for South Africa that distinguished between a formal and an informal sector and identified four types of informal workers, differentiating among informal producers and informal traders, but also among informal workers in the formal sector and informal workers that do not compete with persons engaged in formal sector activities (such as domestic service workers). The authors analysed the consequences of trade liberalization, wage subsidies and unconditional cash transfers.

Dix-Carneiro et al. (2021) developed a general equilibrium model for Brazil in order to understand the consequences of trade liberalization for different economic variables, taking into consideration the presence of an informal sector. Imperfectly enforced regulations enable firms to choose between formality and informality.

While the aforementioned models facilitate an analysis of the potential impact on (in)formality of policies that have other objectives, including, primarily, trade liberalization, the models may also be used to analyse specifically the outcome of interventions designed to foster informality

33 With the introduction of microsimulations into a general equilibrium model, the heterogeneity of the sampled population in terms of their behaviour and factor endowments can be taken into account in an evaluation of the impact of a shock on the general equilibrium (Cockburn, Savard, and Tiberti 2015). Microsimulation techniques permit the analysis of household- and individual-specific distributive effects of those shocks. There are a number of possible approaches regarding the combination of the microsimulation (which is based on household survey data and, potentially, other microdata) and the general equilibrium model, including a top-down approach (from the general equilibrium to the microsimulation model), a bottom-up approach (microsimulation results are fed into the general equilibrium model) or a mechanism that includes a loop between the two models.

34 Gibson and Flaherty (2017) discuss how the informal sector can be incorporated into a specific type of general equilibrium model, namely a computable general equilibrium model.

35 Agénor and El Aynaoui (2003) apply the same model to Morocco.

reduction. Below we outline a number of studies that model the outcome of tax policies and regulatory measures on informality.

Fortin, Marceau and Savard (1997) constructed a model with a formal and an informal sector in various economic branches. The model was calibrated with data on Cameroon and various reforms of the tax and regulatory system were simulated and their impact on the size of the informal sector analysed.

Djomo et al. (2016) formulated a general equilibrium model for Cameroon, with a formal and an informal sector, using the taxpayer number as the criteria of differentiation. They recognized the heterogeneity of the origin of labour informality (defined as not contributing to social security), but distinguished only formal qualified labour, informal qualified labour and unqualified labour. It was assumed, on the one hand, that the informal sector is a “reservoir” of workers who have not found employment in the formal sector, while on the other hand, informal economic units have access to production technologies that are very dissimilar from those used in the formal sector. The authors simulated three policy interventions: an increase in formal sector employment (in the public sector or through public works projects); the extension of VAT to certain informal sector products; and a reduction in VAT on formal sector products that are consumed, primarily, by informal households and a corresponding reduction in public expenditure.

Estrades and Terra (2011) built a general equilibrium model for Uruguay that distinguished between a formal and an informal production sector, and between formal and informal workers. Unskilled and medium skilled individuals may work in the formal or in the informal sector, while highly skilled persons work exclusively in the formal sector. The authors analysed the impact of payroll tax cuts and stricter enforcement of regulations in the informal sector. They also ran microsimulations to analyse the impact of policies on poverty and income distribution.³⁶

The strength of general equilibrium models is due to the fact that they are based on economic

theory (which is made transparent), the fact that they have a strong microfoundation, and the fact that they can identify causality, interactions and indirect effects of policy interventions or economic shocks. Progress with regard to the incorporation of labour market imperfections, including segmentation in production and employment into the model allows researchers to consider the informal sector and informal employment and the corresponding differentiated impact of policies and shocks. That method also facilitates an analysis of the outcome of a broad range of policy interventions and external shocks on (in) formality, and not only the effects of measures that aim to foster the transition to formality.

However, one of the aspects of strength implies, at the same time, a significant weakness. As the results of the simulations of a general equilibrium model are founded on theories, the results are necessarily consistent with those theories. For example, while the analysis of the informal sector has established the heterogeneity of origins, characteristics, and formalization potential of informal economic units, as discussed in the previous chapter, general equilibrium models generally fall back on one theory in the modelling of informality, namely the interpretation that informality is the consequence of a choice of entrepreneurs and/or workers that is taken on the basis of an analysis of the costs of formality. This necessarily leads to the result of lower informality, for example, if payroll taxes are reduced.³⁷ However, as this logic is applied not only to the upper tier of the informal sector, where that consideration may be relevant, but to the entire informal sector, conclusions regarding informality tend to be biased.

Moreover, stronger enforcement of regulations tends to reduce informality, but this may also reduce employment. However, if stronger enforcement mechanisms focus on economic units with greater scope to assume the costs of formality (and the analysis makes the corresponding differentiation), the negative consequences for employment are likely to be smaller than if regulations are enforced across the entire informal sector.

³⁶ Further details on this study, and on its main results are presented in the annex to the present report.

³⁷ Another example of the pre-determination of results is set out in the World Bank Toolkit for Informality Scenario Analysis, in which the underlying model works on the assumption that an increase in the minimum wage (always) leads to higher informality levels (Loayza 2016). That assumption can skew scenario outcomes and necessarily leads to policy recommendations regarding a contained or reduced minimum wage in order to foster a transition to formality.

2.8 Experiments

Experiments are the main instruments for an ex-post outcome and impact evaluation in the strict sense. Experiments (randomized control trials) are conducted to identify and quantifying the outcome of a project, programme or other policy intervention, isolating the outcome of a specific intervention from other factors that might influence the results. In randomized control trials, a treatment group, namely the group targeted in the intervention, and a comparison or control group are established, generally through a randomized procedure that gives the same probability that an individual, firm or other element will be included in one or the other group. The randomization of the selection process guarantees that both groups are sufficiently similar in terms of relevant characteristics, so that the results of the study are not subject to any form of systematic bias. The comparison group must be established ex-ante and its members (and not only the members of the treatment group) must be available for the measurement of the relevant variables prior to and after the intervention in question.

After the intervention the previously defined outcome variables are measured for both groups and compared to figures obtained prior to the intervention. Contrasting the change in outcome variables for both groups enables stakeholders to evaluate the specific results of the intervention and to differentiate short-term and longer-term effects. The procedure can be carried out for specific groups of beneficiaries, distinguishing, for example, on the basis of their gender or level of formal education, so that it can be determined if the intervention has a differentiated outcomes for different groups.

Furthermore, alternative interventions may be conducted simultaneously. In such cases, more than one treatment group is formed so that the differentiated outcomes of different interventions can be analysed.

In practice, the application of the experimental method gives rise to a series of challenges. For example, policies that aim to strengthen respect for rights or enhance compliance with rules and regulations tend to be universal in nature, meaning they target all individuals in a broad sense or in specific firm or population groups. This makes it difficult to establish a comparison

group with the required characteristics, namely a group that is identical or nearly identical with the treatment group and limits the application of the experimental method to programmes that have, by design, a more restricted coverage. For that reason, the experimental method is frequently employed on a limited scale as part of an academic study designed for the generation of information for future policy decisions, and not as part of a programme or policy cycle of specific interventions. The method has been applied mostly to identify the impact of interventions that foster the transition to formality of firms, and not in the context of the formalization of workers employed in a specific job category (Jessen and Kluge 2021).

De Mel, McKenzie and Woodruff (2012) conducted an experiment in Sri Lanka to identify the effects of information and financial incentives on firm formalization. They formed four treatment groups and a control group. The first group was given information on the registration process and the costs of registration were reimbursed. The other treatment groups were offered increasingly high payments. The firms included in the sample were randomly assigned to one of the five groups after smaller firm groups were formed in order to ensure similar firm characteristics in each of the five groups.³⁸

Brazil has introduced a scheme that makes enterprise formalization easier and less costly, but informality has stayed high, which is why de Andrade, Bruhn, and McKenzie (2013) designed a field experiment for the city of Belo Horizonte to analyse the effects of information on and cost reduction of registration, in addition to the effects of inspections to confirm formalization. Two treatment groups and a control group were established. Both treatment groups received information about the advantages of formality and the formalization process, while one of the groups was offered cost-free registration in addition. In the second part of the study, the role of inspections was analysed by studying firms that were visited by a labour inspector, a group of informal firms located in the proximity of the firms belonging to the first group, and a control group.

Benhassine et al. (2016) carried out an experiment among informal enterprises in Benin in order to identify the instruments that incentivize registration under the recently

³⁸ This study is presented in greater detail, as an interesting example of an experiment, in the annex to the present report.

created *entreprenant* legal status regime, which necessitates tax registration but offers a number of benefits, including access to bank accounts, government training programmes, the right to bid for government contracts and clarity with regard to taxation. Four groups were randomly created:

- The enterprises in the first treatment group received in-person visits and detailed information on the benefits of the new legal status regime and, where needed, help with the paperwork that must be completed in order to register the business enterprise;
- The second treatment group also received business training and support to enable them to open a bank account;
- The third treatment group was given, additionally, access to tax mediation services, to help them with tax administration matters;
- The fourth group was the control group.

To generate the required information, administrative data on formalization were used, a baseline survey and two follow-up surveys were carried out, and qualitative data were generated through discussions with study participants and implementing agencies. The study identified the characteristics of informal economic units that were particularly likely to seek formalization under the new legal status regime and supported the design of targeted policies to promote formalization. The authors not only analysed the outcome of the aforementioned measures, but also whether formalization improved the performance of business enterprises.

Campos, Goldstein, and McKenzie (2015) conducted an experiment to analyse the outcome and impact of formalization interventions in Malawi. Besides a control group, they established three treatment groups. The firms assigned to the first group were offered cost-free business registration; the firms in the second group were, in addition, offered a tax-payer identification number free of charge; and the firms in the third group were offered a free business registration certificate, along with an invitation to attend information sessions at a bank where they were offered business bank accounts.

The experiment highlighted that it is important to consider partial formalization and its implications, and the gap between outcomes in terms of formalization and the impact of changing business procedures.

Experiments are the most precise instruments for outcome and impact evaluations as they can establish a causal link between an intervention and the results obtained. They can also differentiate the target group of the intervention, thus taking into account the heterogeneity of informality, and can help identify outcomes for different segments of target groups.

The main drawback of experiments is their relatively high cost. It also must be borne in mind that the results of experiments are only valid for the precise situations and time periods in which they are carried out, and their application in other circumstances (external validity) is limited.

2.9 Quasi-experiments

For ethical reasons or because the policy aim is the universal application of a particular intervention, excluding potential beneficiaries from treatment and including them in the comparison group may not be an option, and an experiment as discussed in the previous section might not be feasible. When factors prevent the application of an experiment, quasi-experiments are a useful alternative method that can help stakeholders understand the causality between interventions and variations in outcome variables. Quasi-experiments are used, primarily, to evaluate the outcome of general policies that, because of their universality, hinder the establishment of ex-ante non treated control groups (Jessen and Kluve 2021).

In this case, comparison groups are rarely established from the outset, but are identified ex-post through statistical methods. The objective of that procedure is to create a control group whose characteristics are as similar as possible to those of the members of the treatment group, so that no systematic bias (i.e., selection bias) can influence the results. One frequently used method is propensity score matching, which provides for individuals in the treatment group to be paired with similar individuals outside that group. Each pair of individuals shares key characteristics, such as gender, age, educational level or occupation. The same approach can be applied to firms.

Another approach is to take advantage of the gradual roll-out of a per se universal intervention. Under that approach, which, for logistical reasons, is often appropriate, the (ideally randomly selected) members of two or more groups receive treatment in succession, with a time lag sufficiently large in order to permit measurement

of its impact.³⁹ Thus, after the first group receives treatment, the following groups that still haven't been given access to the intervention serve as comparison groups. For example, firms or individuals in regions that are covered early by a programme may be compared with firms or individuals in regions that are to be included in that programme at a later point in time.

A potential advantage stemming from the establishment of more than two groups is that it becomes possible to introduce and measure adjustments to the intervention. For example, if the comparison of the outcomes of group 1 (treated) and group 2 (not yet treated) leads to adjustments in the intervention, the later comparison of the outcomes of group 2 (then treated) and group 3 (still not yet treated) can show if those adjustments have a positive impact.

Finally, if a broad-based programme provides for different interventions or interventions of varying magnitude, for example for firms operating in different economic sectors, those differences can be used to analyse the outcome and impact of each particular intervention.

To analyse the effects of an intervention on the members of treatment groups compared with the control group, a difference-in-difference method is often used, which allows stakeholders to measure changes (differences) in outcome variables prior to and following that intervention for all groups. The impact of those changes on the treatment and the control groups is then computed and compared in order to understand the effects of the intervention.

Another method for establishing a control group is regression discontinuity design. That method can be applied when an intervention is designed for individuals or economic units up to a specific limit (age, plot size or revenue, for example). In that case, the comparison groups are formed by a group of individuals or economic units that cross that limit, but are close to it (one year older, 0.1 hectare bigger, 10 per cent more revenue, etc.). Thus, although the comparison group differs from the treatment group, it does so only very slightly, so that the differences in the evolution of the outcome variables may be attributed mainly to the intervention. Another example of regression discontinuity is using the moment of a specific intervention as a cut-off and compare attitudes before and after the intervention. For example, Fajnzylber, Maloney and Montes-Rojas

(2011) and Piza (2016) analysed the effects of a Brazilian law that provides for incentives to transition to formality and compared formal firms created prior to and following implementation of that law.

If it is impossible to form a comparison group that guarantees unbiased results with regard to the impact of an intervention on the treatment group, an alternative is the use of instrumental variables. Specifically, if there are observed or unobserved variables that lead to differences between both groups, the result of the comparison of the evolution of their corresponding outcomes is biased. For example, if potential beneficiaries of an intervention may choose whether they participate or not in the corresponding programme, the decision normally will not be made randomly but because of reasons difficult to measure. This means that the explanatory variable "participate in the programme" is not independent from the error term of the corresponding regression model, violating one of the key requirements of those models. As an alternative, an instrumental variable may be identified which is correlated to the variable of interest, but independent from the error term, and which indicates indirectly the effects of the intervention on the outcome variables. For example, Almeida and Carneiro (2009) studied the results of the stricter enforcement of labour regulation using the distance from a labour inspection office as an instrumental variable for the strictness of enforcement.

Furthermore, two informal microenterprises may have the same revenue in the year prior to the intervention so that is assumed (given that other relevant variables are also similar) that one microenterprise can be assigned to the treatment group and the other to the comparison group. However, one firm may be economically stagnant, with revenue remaining relatively stable in recent years, while the other firm may be in a period of expansion, having doubled its revenues in the previous 12 months. Thus, although a static observation could lead to the assumption that both firms are sufficiently similar, a more dynamic view would reveal that they differ considerably, as the second firm is likely to increase its revenue even if it is not a beneficiary of the intervention. The use of an instrumental variable may help to address that methodological problem.

39 This procedure, of course, complicates the identification of long-term effects, although it doesn't make it impossible.

Several quasi-experiments have been conducted on the impact of trade reforms on informality.⁴⁰ For example, Goldberg and Pavcnik (2003) looked at sector-specific differentiated reductions in import duties in order to analyse whether trade reforms in Brazil and Colombia had led to an expansion of the informal sector. The same approach was adopted by Ben Salem and Zaki (2019) with regard to trade reform and informality in Egypt.

Monteiro and Assunção (2012) analysed how the Brazilian SIMPLES tax simplification programme and smoother business registration procedures affected small and microenterprises. To that end, they compared the evolution of formalization in sectors affected and not affected by the reforms enacted.

Bosch, Fernandes and Villa (2015) analysed whether a Brazilian awareness-raising programme encouraged registered self-employed workers to comply with their legal obligation to contribute to the social security system. To that end, they looked at the distribution of the relevant information booklet across various states. This allowed them to compare the states where information booklets had been distributed with states where that was not the case, and to identify the outcome of those efforts to “nudge” a behavioural change.⁴¹

Quasi-experiments require fewer resources than experiments and can be conducted where design problems or ethical considerations make it difficult to adopt an experimental method. On the other hand, the establishment of technically-sound control groups is a key challenge in quasi-experiments, which may also give rise to external validity challenges. Another problem arises if the intervention itself is not designed in ways that facilitate a quasi-experimental evaluation. Indeed, methodological and data problems may become apparent, for example, in the establishment of randomly assigned treatment and control groups.

2.10 Meta-analysis

Individual evaluations can only identify the effects of a specific intervention in a specific place and in a specific moment. Thus, strictly speaking their results are of limited relevance in other situations. However, if a sufficient number of similar studies

have been carried out, that limitation may be addressed by conducting a meta-analysis of those studies, in the case of the evaluation of formalization programmes, specifically on experiments and quasi-experiments.

To conduct a meta-analysis, relevant studies must first be collected. Those studies should have a common objective, such as to evaluate the effects of interventions that foster the transition to formality. Those studies are then disaggregated by type of intervention, method used and the outcome variables of interest.

The first step in the meta-analysis itself is a review of the results of the individual studies in order to identify, for example, the types of interventions that had the most positive effects. Another variable that may be considered is the time horizon, namely whether the studies differentiate between short- and long-term effects.

As was done by Floridi, Demena and Wagner (2020) and Jessen and Kluve (2021), a quantitative analysis may then be carried out, in which the sign, significance and magnitude of the intervention effect are analysed systematically across the selected studies. The meta-analysis establishes a set of explanatory data that cover variables such as the type of intervention, the type of outcome, such as the formalization of firms or labour, the characteristics of the studies and the data included, and the attributes of business owners. This kind of analysis may also take into account the “publication bias”, namely the suspicion that studies that find a significant outcome are more likely to be published. Finally, the meta-analysis can include context variables, such as the macroeconomic or labour market situation, or structural aspects such as perceived levels of corruption, regulatory constraints, or the characteristics of the legal system, in order to determine the degree to which that context may affect the outcome of the intervention.

That approach facilitates the identification of interventions with a particularly significant impact on formalization. For example, Floridi, Dema and Wagner (2020) conducted a meta-analysis to assess the results of studies on interventions to promote the formalization of informal firms. They found that firm formalization interventions had a positive effect, but that the magnitude of that effect was limited; moreover, any positive effect

40 Alemán-Castilla (2020) drew attention to a number of studies on that issue.

41 Their analysis is presented in greater detail as an example of the application of the quasi-experimental method in the annex to the present report.

disappeared once publication bias was taken into account. If, however, the heterogeneity covered by the control variables is taken into account, more specific results emerge. Interventions that enhance the benefits associated with formality tend to have more positive effects than cost reduction or enforcement measures. Long-term effects tend to be more positive than short-term results. Formalization in the form of general firm registration is easier to accomplish than registration with the tax or social security authorities. Finally, small and medium-sized business enterprises are more likely to transit to formality than microenterprises.

Jessen and Kluve (2021) analysed the results of studies on interventions on firm and labour

formalization and found that half of all estimates were not statistically different from zero. Among the interventions for which results were statistically significant and positive, tax incentives had the most positive outcome, while awareness-raising campaigns, in combination with other instruments, tended to play a positive role. Additional results showed that interventions to promote labour formalization tend to be more effective than interventions to promote the formalization of firms. Larger programmes were more effective than limited-scale interventions, and long-term effects tended to be more positive than short-term outcomes. Finally, the positive effect of interventions tended to be stronger in a favourable labour market context.



3

A systematic approach to evaluations

As mentioned in the introduction to the present report, an evaluation of the transition to formality may form part of a development project, programme or policy cycle, or of a research project designed to measure the impact of specific factors, including policies, economic shocks and sociocultural variables on (in)formality and/or to identify effective policy instruments to foster that transition.

In those research projects, evaluation is a key objective and projects must therefore be designed appropriately in order to ensure their success. On the other hand, impact evaluation is not always recognized as a relevant component of the project/programme/policy development process.

The review of evaluation procedures in the preceding chapter underscores that there is no ideal approach, and that all methods have their advantages and deficiencies. While an approach based on a combination of several of those methods may help to address many of the challenges in that regard, that option is often not feasible because of resource constraints. The most appropriate evaluation method must therefore be selected in each situation.

In this chapter, relevant aspects that should be considered in order to ensure the success of evaluations are reviewed. Particular emphasis is placed on institutional aspects, the selection of outcome and impact variables, information sources, and the design of evaluations.

3.1 Institutional aspects

The evaluation of the effects of a specific intervention or a combination of different interventions designed to foster the transition to formality should be carried out by a different institution than the one(s) responsible for the intervention(s) in question, in order to minimize any bias or suspicion of bias. Ideally, the experts that perform the evaluation have carried out similar tasks for other institutions or agencies and are likely to continue to do so, so that they are not dependent on the goodwill of one specific institution.

At the same time the team in charge of the evaluation, while independent from the institution conducting the intervention, requires the full cooperation of that institution for a successful evaluation. The institution must

therefore be convinced of the importance of an evaluation of its intervention(s) and understand the role of the evaluation in the policy/programme/project cycle, so that the evaluation is perceived as a valuable instrument for the improvement of its interventions, and not as a potential source of negative feedback. Ideally, close cooperation between the institution overseeing the intervention and the evaluation team should be established prior to the intervention, so that issues relevant to the evaluation can be reviewed in a cooperative manner by all relevant stakeholders.

Funding is not always provided for evaluations of interventions undertaken within the context of a development project/programme/policy cycle. It may therefore be necessary to mobilize additional resources from institutions that are not directly involved in the intervention in question but may be interested in any lessons learned from the experience. It should be noted in that regard that resource constraints frequently impede the implementation of optimal review procedures, and it may be necessary to strike a balance between the type of intervention undertaken and the financial resources available.

Finally, a key factor in any evaluation is institutional stability. Any lessons that can be drawn from the evaluation exercise should become part of the institutional memory of the entity overseeing the intervention so that they can inform future interventions. Institutional instability, including, in particular, high technical staff turnover, tends to undermine the longer-term learning impact of evaluations.

3.2 Outcome and impact variables

A key step in the design of an evaluation is to identify the desired impact of the intervention, so that the corresponding result chain monitoring – outcome evaluation – impact evaluation can be established. The first step is to monitor the intervention. For example, the question “have the booklets setting out the advantages of formalization and relevant administrative procedures been distributed as planned?” can be answered so that as the

following step the outcome variable(s) of interest can be evaluated.

In some cases, outcome variables are the same as the intervention objective itself, such as “Increase the number of registered businesses by 15 per cent annually over a period of three years”.⁴² In other cases, the following questions must be answered in order to establish the outcome variables:

- As many businesses and workers are not entirely formal, nor entirely informal, which outcome variables cover adequately the objective of the intervention? Should they reflect the transition to complete formality or merely a move to greater formality within the range of partial formality and partial informality?
- Should the evaluation concentrate on an immediate objective (the outcome of the intervention), such as the registration of informal businesses with the local authority or the registration of informal workers with the social security institution, as in both cases certain advantages of the transition to formality are nearly guaranteed (the increase of the local authority’s revenue and the improvement of social protection, respectively)?
- Or should the impact of these outcomes also be covered, such as an improvement in business productivity fostered by the transition to formality, greater respect for the rights enshrined in labour legislation or improved worker incomes?

3.3 Sources

In addition to resource constraints, data limitations frequently impede the application of a specific method. As discussed in the previous chapter, certain methods require the generation of new data, produced as an inherent part of the evaluation exercise, while others draw on existing information. In this section, the main sources of data on enterprise and labour (in)formality are reviewed briefly. Some of those sources have already been mentioned in Chapter 2. Other methods for organizing primary data and augmenting their analytical value are also reviewed.

⁴² That predefinition may be influenced by the definition of (in)formality, which differs among countries.

As the immediate objective of enterprise formalization is to encourage them to register with relevant public authorities, the registers maintained by those authorities are a key source of information, particularly registers referring to taxes or to (local or national) business permits. In certain sectors, registration with formal business associations may be an intermediate step to formality. It is important to measure not only initial registration, but also its validity during the relevant period of research, as certain registrations must be renewed regularly. Indeed, after a period of formality a firm might turn informal again if it fails to reregister with the authorities. Monitoring whether formalized firms comply with relevant rules and regulations, such as whether they make any required tax payments, may also form part of the evaluation process.

Economic censuses are designed to gather data on all formal and informal economic units in a specific economic sector. They are thus a key source of information on the formality status of business enterprises, which may be categorized as completely formal, partially formal or completely informal. At the same time, they can provide data on the characteristics of informal (or partially formal) firms that determine to which tier of the informal sector they belong and, in this way, generate key inputs that can be used to estimate the likelihood of their formalization and to design interventions to achieve that objective. Economic censuses are, however, very expensive to undertake and, as a result, are conducted only occasionally. Furthermore, their coverage of informal economic units is often limited due to the fact that many of informal business enterprises have no easily identifiable address, particularly if they are integrated into a household or if they have no fixed location, as in the case of street vendors or service workers who move from one location to another. A more cost-effective approach is to carry out a census within a relatively small geographical area that has been identified as typical of the country as whole. For example, Charman et al. (2015) carried out a small area census in township settlements in five major cities in South Africa. That census was complemented by a survey of all identified micro-enterprises in key sectors, in-depth interviews, and participatory research techniques.

Similarly, population censuses are a potentially valuable instrument that can be used to enhance

understanding of the informal economy. Nonetheless, census questionnaires are often not sufficiently detailed to cover the informal sector and/or informal jobs outside the informal sector adequately. Furthermore, as in the case of economic censuses, the low frequency of their implementation limits their value as an instrument for the measurement of the effects of specific interventions on the informal economy and the identification of the causes of changes in the levels and characteristics of informality.

Data on informal economic units can be generated through enterprise surveys, which may focus on units below a certain baseline, such as the number of workers they employ. Although some enterprise surveys are only conducted among formal firms,⁴³ others cover both registered and unregistered economic units. For example, Clarke (2011) drew on the results of a survey of 4,801 business enterprises with up to 50 employees conducted within the context of the Zambia Business Survey, which covered both registered and unregistered firms. That was possible because the sampling frame was not, for example, a pre-existing list of firms (which would be mostly formal), but the 2000 population census.

Qualitative data can also be generated through in-depth interviews with the owners of informal economic units. While interviews do not always provide statistically representative information, the careful selection of interviewees can generate relevant information, for example, regarding attitudes and preferences of different types of informal unit owners. In that context, Selamat et al. (2011) conducted interviews with formal and informal micro-entrepreneurs in Penang Island, Malaysia.

Labour force household surveys are a key instrument used to measure the evolution of the labour market. Implemented worldwide, they are increasingly used to deepen understanding of the informal economy, and many countries now include questions in their labour force household surveys to that end. There is, however, still considerable variation in terms of the specific questions asked, and any analysis of regional or global trends must integrate national data collected using different (in)formality indicators (ILO 2018).⁴⁴ In general, household surveys are

43 This is the case, for example, in surveys of business enterprises conducted by the World Bank and related micro-enterprise surveys.

44 In the case of household surveys that do not generate information on informal employment, as defined by the Seventeenth International Conference of Labour Statisticians, data on employment in vulnerable categories may be used

designed to generate quantitative data but may also be used to gather qualitative data.⁴⁵ A rotating survey samples can also be used so that the same household is surveyed several times. That can facilitate efforts to monitor any increase or decrease in labour formality, and the reasons for any change. Rotating survey samples can reveal, for example, if an unemployed individual obtains an (in)formal job, if a formal wage earner becomes an informal own-account worker, or if an informal own-account worker becomes part of the formal economy. The number and type of transitions to (in)formality can therefore be estimated. This is very useful input that can be used by researchers to identify the factors that lead to higher or lower levels of (in)formality and improve relevant policy interventions.

An improvement on traditional labour force household surveys for the identification and analysis of the informal sector is the 1-2-3 survey (Nordman and Roubaud 2010). In step 1 of the survey, owners of informal economic units, namely employers and own-account workers, are identified using a traditional household survey, and in step 2 these are asked to respond to additional questions regarding their economic activity.⁴⁶ Building the sample at the household level addresses the challenges inherent in economic censuses and surveys, which cannot be used to identify so-called “invisible” informal economic units, especially in the informal sector’s lower tier. Thus, valuable additional information regarding informal economic units can be generated, deepening the understanding of the informal sector and strengthening the design of policies to foster the transition to formality.⁴⁷

In the case of experiments, specific surveys are required to generate relevant information on treatment and control groups. Indeed, the data generation process is an essential part of this evaluation process.

Innovative technologies can help stakeholders identify informal businesses. For a sector of the metropolitan area of Medellín, Colombia, for example, an algorithm was developed to identify businesses from Google Street View images (Quiñones Domínguez and Saldarriaga 2020). Businesses identified in that manner that are not included in the relevant register of businesses are assumed to be informal. That rapid, low-cost method provides results that can be updated easily. However, it can only be used to identify “visible” informal economic units and cannot be used to find economic activities that cannot be identified using Google Street View, such as activities conducted within households or that do not take place in a specific location. New, improved approaches that make use of big data to measure informality may, of course, be developed in the future.

The spatial characteristics of informal business enterprises can be determined using the Global Positioning System (GPS). For example, Gumbo et al. (2018) used GPS data to monitor the increase in the number of informal economic units, and the spatial expansion of those units in Harare, Zimbabwe between 1990 and 2010.

As mentioned in Chapter 2 of the present report, certain methods draw on a wide range of information sources to collect data on multiple variables that may affect the evolution of (in) formality, including data on taxation and labour market regulations, economic growth at the national, regional or sector level, foreign trade (imports, exports, customs duties), labour markets, and political and sociocultural factors, such as levels of trust in public institutions, respect for property rights and perceptions of corruption.

as a proxy indicator, as those categories are often characterized by very high levels on informality (Kiara and Leung 2020).

45 See, for example, Coolidge and Ilic (2009) and Cling, Razafindrakoto and Roubaud (2012).

46 Step 3 is part of the expenditure module of the household survey and covers the locations at which consumer goods are purchased, which include formal and informal shops.

47 Acknowledging the heterogeneity and multidimensionality of firm informality, and the wide range between total informality and total formality, the Colombian National Department of Statistics (Departamento Nacional de Estadística) proposed the use of a 1-2-3 survey for the elaboration of a formality index that covers (in)formality in the fields of business registration, transactions to acquire inputs, regulations of production, and tax declarations and payments (Departamento Nacional de Estadística 2019).

► Estimating informal production

While the sources reviewed in this section provide data on informal economic units and/or jobs, other approaches can be adopted to estimate the contribution of informal economic activities to GDP. The sum total of all informal economic units is often called the informal economy, an understanding of this concept that is different from the definition elaborated by the Fifteenth International Conference of Labour Statisticians and adopted by ILO, as explained in Chapter 1 of this report.

Medina and Schneider (2018) list the following methods by which it is possible to estimate the size of what they call the shadow economy, namely methods used to cover activities that are not taken into consideration in a country's national accounts: surveys on public perceptions of the shadow economy, actual participation in shadow economy activities (for example, by looking at undeclared working hours and payments) and opinions regarding shadow economy practices; surveys of company managers; analysis of discrepancies between national expenditure and income statistics and between official and actual labour force figures; analysis of discrepancies between GNP growth rates and electricity consumption; analysis of monetary transactions in a given economy, and of estimates of the cash in circulation in the informal economy; and the Multiple Indicators, Multiples Causes (MIMIC) approach, which is based on a theoretical model that relates a set of exogenous variables to the evolution of the shadow economy. The authors adopted the MIMIC approach in their analysis of 158 countries and found that the shadow economy accounted for some 31.9 per cent of official GDP on average, with Zimbabwe (60.6 per cent), Bolivia (62.3 per cent) and Georgia (64.9 per cent) having the largest shadow economies.

One way to estimate energy consumption is to analyse data collected by satellites on the illumination of urban areas at night. Rangel-Gonzalez and Llamosas-Rosas (2019), for example, used nighttime illumination data from Mexico and estimated that the non-registered economy contributes between 25.25 per cent and 31.17 per cent of Mexican GDP, depending on the reference area (United States or the Mexican state of Nueva León).

All the aforementioned approaches have particular advantages and shortcomings, and their results may vary markedly.

While the aforementioned sources usually generate primary data, some evaluation methods draw on sources that provide data that has already been processed. Input-output tables, for example, provide information on sales and purchases of goods and services occurring among producers in different sectors (capital and intermediate goods and services) and between producers and consumers (final goods and services), taking into account imports and exports. A social accounting matrix provides additional information in order to identify all monetary flows from sources to recipients and all economic agents, and can cover production sectors, factors of production (differentiating the distribution of value added among capital owners and workers) and different types of households, including, for example, rural and urban households. A key advantage of this instrument for organizing primary data is

that it is possible to include many variables, provided that consistency (input equals output) is preserved. For example, if information is available on the proportion of informally generated value added at the sector level, the effects of changes of certain variables on informality can be modelled.⁴⁸ It is also possible to enhance that data source by incorporating non-monetary information, for example in simulations of formal and informal economy job creation as a consequence of economic changes (considering, for example, sector-specific growth rates). To that end, for each economic sector, the corresponding job number (and the characteristics of interest) must be known, so that labour intensity can be calculated. As sector-specific backward and forward linkages can be reproduced, not only direct but also indirect and induced job generation can be calculated.

48 Gibson and Flaherty (2017) discuss the issues that are relevant for the incorporation of the informal sector into a social account matrix.

Finally, it is important to ensure that the available data truly reflect the variable of interest. For example, registration with the tax authorities does not necessarily imply that a firm complies with all obligations stemming from registration. In fact, the firm might have ceased to exist.⁴⁹ For that reason it is very important to analyse the characteristics of the data used by researchers, so that they may assess whether those data reflect the characteristics that the evaluation is designed to analyse.

3.4 Evaluation design

If a favourable institutional setting is established, the institution overseeing the intervention and the evaluation team must define the outcome variables that will drive the evaluation process. As mentioned previously, in most cases that should be a relatively straightforward issue, as those variables are already defined when the intervention itself is designed. In addition to the outcome variable(s), however, impact variables may be included. For example, if the objective of a specific intervention is to encourage business registration, the evaluation could also analyse whether registration has a positive impact on business performance and/or the formalization of workers employed by business enterprises. In view of the heterogeneity of informal economic units and workers, the broad range from more to less (in)formality and the numerous potential repercussions of formality, it would be advisable to establish more than one outcome and one impact variable, if possible.

The next step is to establish the method of evaluation and the statistical and econometrical instruments of analysis to be used. A review should also be conducted of the data informing the evaluation, while the possibility of evaluating the evolution of outcome variable(s) using those data should also be explored. Assessing progress in the registration of economic units should, for example, be simple, but an evaluation of other outcome variables will require the identification and potentially the generation of additional data. That means that prior to the implementation of the intervention, data must be available and, if necessary, produced so as to establish a baseline for the outcome variable(s).

To that end, the sources discussed in this chapter may be reviewed in order to identify an appropriate means of generating the required information, taking into account the resources required in each case and the available funds. While restricted data availability and resource constraints may narrow the range of methods that can be used in practice, a broad range of data sources are available.

In the extreme case that no resources are available for special data generation, a simplification process may be helpful. For example, in the case of an intervention that aims to foster the registration of business enterprises with the tax authorities or other institutions, a gradual roll-out process could be undertaken, so that the intervention is implemented in a limited number of steps in different areas of the country. The impact of the measure can then be assessed by comparing registration numbers in areas covered by that measure and areas which are not. In addition, if the implementation takes place in more than two steps, the longer-term outcome of the measure can be studied, as the first area to be covered can be compared with other areas when the measure is extended to those areas. That procedure is not only relatively inexpensive but can also reduce the administrative burdens that often stem from the simultaneous application of broad-based measures across a large geographical area.

As the outcome of interventions can be heterogeneous for different subgroups of firms or workers, efforts should be made to ensure that subgroups of interest are adequately represented in the treatment and control groups, so that differences can be identified on a statistically significant base.

Finally, reality always gives rise to surprises. Unexpected developments in the evaluation may affect the design of an experiment. Indeed, researchers must frequently modify experiments and must sometimes devise creative solutions that do not always fully comply with the guidance provided in relevant textbooks.⁵⁰ In such cases it is critical that the approach adopted to address any challenges stemming from unanticipated developments is presented in a transparent manner.

49 This was the motive for an intervention implemented in Brazil, which was analysed by Bosch, Fernandes and Villa (2015). Díaz et al. (2018) argue that, for this reason, registration with the tax authorities is a weaker indicator of formality than registration with the municipal authorities, with whom it is often necessary to re-register on an annual basis.

50 An example of such problems in an experiment is outlined in section 2 of the annex to the present report.

 4

The importance of a supportive context for interventions to promote the transition to formality

As highlighted in the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204), in addition to the transition of workers and economic units from the informal to the formal economy, the following can also promote labour and business enterprise formality:

- ▶ Creating, preserving and sustaining business enterprises and decent jobs in the formal economy;
- ▶ Preventing the informalization of jobs in the formal economy.

Sustainable economic growth is clearly a key factor that can sustain progress in both regards, Economic growth is also critical in that it can

support interventions that foster the transition of workers and economic units to formality.

In this chapter, firstly the relevance and limits of economic growth for the transition to formality will be discussed, and secondly a number of other factors that have been identified as important in that respect will be reviewed.

Economic growth is crucial in efforts to promote formality for the following reasons:

- ▶ Economic growth is usually positively correlated with the creation of wage jobs. As those represent the job category that generally shows the highest level of formality, growth tends to lead to higher levels of formality within the workforce;⁵¹

51 This aspect of formalization is the base of the decomposition analysis described in section 2.3 of the present report.

- Higher levels of formal job creation tend to limit the need of poorer households to (auto) generate informal jobs for subsistence reasons. As a consequence, in a high growth situation, informal sector employment tends to expand less, stagnate or even fall;
- While the creation or destruction of informal sector jobs generally occurs in a countercyclical or acyclic manner, informal sector output and income tend to increase in a positive growth environment, although less so than in the formal sector (Bargain and Kwenda 2009; Ohnsorge and Yu 2021). Furthermore, higher informal sector income reduces the pressure on low-income households to encourage additional family members to seek employment in the informal labour market;⁵²
- Higher incomes provided by informal firms in the upper tier of the informal sector that benefit from an expanding economy, coupled with positive growth expectations, may mitigate the costs of formalization and increase its attractiveness, so that more upper tier informal firms may opt for the transition to formality. Conversely, a negative macroeconomic environment makes the costs of formalization more onerous, discouraging informal firms from pursuing formalization (Jessen and Kluve, 2021);
- A low-growth environment, particularly during an economic crisis, exerts pressure on firms and workers to enter the informal economy in order to reduce their expenditure. This leads to an expansion of the informal sector and an increase in informal employment in the formal sector.⁵³

As a consequence, it has been shown that GDP per capita and informality rates are negatively correlated, although with significant dispersion, indicating that economic growth is not the only factor in that regard (ILO 2018). Furthermore, several econometric studies have found that

GDP per capita is the variable with the strongest correlation with formality rates and that economic growth is the main factor that fosters formalization (Maloney 2001; Loayza and Rigolini 2006; Salazar-Xirinachs and Chacaltana 2018).

Infante (2018) compared two factors that contributed to increased labour formality in Latin America between 2005 and 2015. The first factor was the increased job proportion of the formal sector in the relatively high growth context that characterized that period, and the second factor was the change in labour formality rates within the formal and informal sectors. The author showed that about two thirds of the reduction in the labour informality rate at that time was due to structural effects, namely the growth of the formal sector, while one third was achieved through higher formality within both the formal and informal sectors.

If the period analysed by Infante (2018) is divided into two subperiods, one with a higher average growth rate (2005 to 2012, when growth stood at 3.8 per cent per year) and one with a lower growth rate (2012 to 2015, when growth was approximately 1.3 per cent per year), the following is apparent:

- In both periods, labour informality decreased, but at a higher pace in the first period (a decrease of 0.48 percentage points per year) than in the second (a decrease of 0.14 percentage points per year);
- In the first period, the growth of the formal sector contributed some 75 per cent of the overall reduction in labour informality, implying that the growth of the formal sector led to a reduction in informality of 0.36 percentage points per year;
- That contribution fell to some 40 per cent of the overall reduction in labour informality in the second, low growth period, implying that the growth of the formal sector led to a reduction

52 In an economic crisis, although per capita income of informal workers tends to fall more precipitously than per capita formal sector wages, total informal sector labour income often tends to fall less precipitously than overall formal sector income because of the increasing proportion of informal jobs in the overall economy. As found by Ohnsorge and Yu (2021), this tends to dampen the impact of recessions.

53 In Brazil, for example, after a number of years of relatively high economic growth, a significant increase in labour formality and a decrease in the number of informal private sector wage jobs, the country began to experience low or negative economic growth rates as of 2014. In those economically unfavourable circumstances, the number of formal private sector wage jobs declined steadily. The number of informal private sector wage jobs also fell, but only until 2015. Indeed, from 2016 onwards, despite ongoing low or negative economic growth, the number of informal private sector wage jobs began to rise again, with an increase in these jobs of more than 1.6 million between 2015 and 2019. As it is unlikely that many new wage jobs have been created under such difficult economic conditions, it can be assumed that that increase, matched by a decrease in formal private sector wage jobs (a loss of some 2.3 million jobs between 2015 and 2019), represented, to a significant degree, the informalization of existing, previously formal jobs. (Author's calculations, on the basis of data provided by the Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics).)

in labour informality of only 0.06 percentage points per year during that period.⁵⁴

In addition to the effect of economic growth reflected in the expansion of the formal sector, if some of the growth-related aspects of the increase in formality within the formal and the informal sector mentioned above are considered, the role of economic growth might even be stronger than this exercise suggests.

Economic growth does not necessarily foster higher formality rates, however, even if that growth is labour intensive and many wage jobs are created. In many Asian countries, for example, many of the jobs created in a high-growth context are non-standard jobs that fail to meet formality criteria (Chacaltana and Leung 2020).

On the other hand, the formal employment elasticity of economic growth may vary within a country over time. Reforms such as trade liberalization or the privatization of public enterprises may reduce the labour intensity of economic growth, which may, in turn, affect formal sector job growth.⁵⁵

Even if economic growth has a favourable effect on formal employment, economy-wide repercussions can vary widely, reflecting the specific structure of the national labour market. Table 3 provides a fictitious example, comparing the impact of economic growth on (in)formality in two developing countries. In country A, the proportion of formal sector employment and employment in the upper tier of the informal sector (together, in a simplified manner, interpreted as the demand-driven segment of the labour market) is larger than in country B, where it is the sum of employment in the lower tier of the informal sector and unemployment (together, in a simplified manner, interpreted as the supply-driven segment of the labour market).

In both countries, the employment elasticity of growth is 0.5 in the formal sector and 0.8 in the more labour-intensive upper tier of the informal sector, while the number of individuals in the lower tier of the informal sector and in unemployment reflects the gap between the jobs available in the formal sector and the upper tier of the informal sector and the available labour supply.⁵⁶ In both countries that supply (the labour force) shows trend growth of 2 per cent per year.

In year $t+1$, in both countries, the formal sector and the upper tier of the informal sector (the two segments where economic growth is concentrated) register economic growth of 5 per cent, which leads to an employment growth rate of 3 per cent in the formal sector and 4 per cent in the upper tier of the informal sector.⁵⁷

However, the difference in the size of those labour market segments in year t leads, in country A, to an increase in the proportion of formal sector employment of 0.6 percentage points and of 0.3 percentage points in the case of employment in the upper tier of the informal sector, while in country B those proportions rise only 0.3 and 0.2 percentage points, respectively. This implies that the economic growth of 5 per cent leads to a reduction in the supply-driven segment of the labour market (the lower tier of the informal sector and unemployment) of 0.9 percentage points in country A, but of only 0.5 percentage points in country B, where the absolute number of persons working in that segment even grows by 1.2 per cent despite the relatively high economic growth rate in the demand-driven segments of the economy.⁵⁸ The example illustrates that in countries with a relatively large informal sector, and particularly a large lower tier, a long period of high economic growth is required for significant progress to be made towards formality.

54 Although no data is available on the subsequent evolution of regional labour informality in Latin America, data on the changing job creation over the following years suggest that the structural effect probably turned negative. Indeed, between 2015 and 2019, the region experienced even slower growth (a yearly average of some 0.25 per cent of regional GDP). In that context, the proportion of jobs found in job categories that tend to show the highest levels of informality, namely self-employed workers who are not professionals, technicians or administrative workers, employers and employees in microenterprises, domestic service workers and unpaid family workers, rose from 42.5 per cent in 2015 to 44.2 per cent in 2019 (ILO 2020).

55 See, for example, Davies and Thurlow (2009) and Menezes-Filho and Muendler (2011). The employment repercussions of that type of reform are heterogeneous, however, and Ghose, Majid, and Ernst (2008) show that increased trade intensity has no systematic impact on formal sector employment in developing countries.

56 In this exercise, the intermediate tier of the informal sector is considered part of the upper tier.

57 According to Ohnsorge and Yu (2021) informal sector output grows procyclically, but less than proportionally than formal sector output. In our exercise the upper tier of the informal sector grows proportionally with the formal sector, while its lower tier grows less than proportionally. However, the output growth of the lower tier segment is irrelevant for employment in that segment, as this is modelled as supply driven.

58 If we assume that country B, a country with a lower GDP per capita, has a higher demographically-driven labour force growth rate, that difference will be even greater.

► **Table 3. Economic growth and employment composition and growth, by segment: a fictitious exercise (per cent)**

	Country A		Country B	
	Year t	Year t +1	Year t	Year t +1
Size				
Labour force	100	102	100	102
Formal sector	60.0	61.8	30.0	30.9
Informal sector, upper tier	15.0	15.6	10.0	10.4
Informal sector, lower tier and unemployment	25.0	24.6	60.0	60.7
Growth rate				
Labour force		2.0		2.0
Formal sector		3.0		3.0
Informal sector, upper tier		4.0		4.0
Informal sector, lower tier and unemployment		-1.6		1.2
Proportion in labour force				
Formal sector	60.0	60.6	30.0	30.3
Informal sector, upper tier	15.0	15.3	10.0	10.2
Informal sector, lower tier and unemployment	25.0	24.1	60.0	59.5
Total informal sector and unemployment	40.0	39.4	70.0	69.7

Notes:

- (1) For employment in the formal sector and the upper tier segment of the informal sector, the figures in t+1 result from the application of the growth rates in (2). The figure for the lower tier segment of the informal sector and unemployment is the difference between the size of the labour force and those two segments.
- (2) The growth rate of the labour force is imposed. Growth rates for employment in the formal sector and the upper tier segment of the informal sector stem from assumed employment-growth elasticity of 0.5 and 0.8, respectively. The growth rate for the lower tier segment of the informal sector is calculated from (1)
- (3) The figures are a recalculation of the data in (1).

Source: Author's calculations

Patterns of economic growth are also relevant. It is, for example, important to ascertain whether highly- or lowly-formalized sectors lead economic expansion and growth in employment. This is particularly the case when long-term structural change takes place, as a reduction in the relative weight of total employment in the agricultural sector (which is often the most informal sector of the economy), and the expansion of more formal sectors tends to contribute to higher aggregate formality. In the short-term, the sectoral composition of economic and employment growth is relevant as the rapid expansion of highly formal sectors tends to support the formalization process. Nonetheless, a strong growth rate of (initially) highly informal sectors

may also contribute significantly to increased formality if that growth is spearheaded by formal firms so that the sectoral formality rate increases strongly, with repercussions for the aggregate formality rate. That situation has been observed in a number of countries, including Peru (Chacaltana 2018).

The characteristics of economic growth may also influence the composition of informal employment. For example, Chant and Pedwell (2008) review literature that reveals that new forms of informality that have emerged in the context of the establishment of global value chains have affected female workers in particular and that that tendency may be dubbed the

“feminization of informality”.

Furthermore, certain policy and sociocultural factors influence the outcome of formalization policies, and policies designed for other objectives may affect (in)formality. For example, it has been found that confidence in the legal system, and particularly its capacity to uphold property rights, favours formalization (Loayza and Rigolini 2006; Floridi, Demena and Wagner 2020).

Finally, the perceived intensity of corruption may influence whether business enterprises and individuals seek to formalize their status, albeit in a complex manner. On one hand, high levels of corruption may stimulate formalization in order to “escape” from corrupt officials. Evidence for this is ambiguous, however, probably because only complete formalization may protect firms and individuals from corruption effectively. Partially formal firms may remain vulnerable to corruption. It is also possible that firms believe that formalization will bring them to the attention of corrupt officials, deterring them from taking steps to formalize their status. At the same time, paying bribes to an official may be seen as a regular expense that must be borne by informal businesses, especially if the bribes paid are relatively small in comparison with the costs of formalization. The benefits of formalization itself may also be perceived as limited because of corruption, which may also affect formal firms. Thus, on the other hand, high levels of corruption

and high levels of informality may be positively correlated (Floridi, Demena and Wagner 2020).

As for policies designed to achieve other objectives but which have an impact on (in) formality, the following three examples may be illustrative. Firstly, the introduction of a large non-contributory pension scheme in Brazil led to the retirement from the labour market of many older people, the majority of whom worked in the informal sector, thereby reducing the informality rate (Krein et al. 2018). Secondly, the creation of non-contributory social programmes for informal workers has been identified as an obstacle for formalization, as those workers are often no longer entitled to the benefits of those programmes when they formalize their status. They do, on the other hand, gain access to the benefits of formality, but access depends on the payment of workers’ contributions. This may reduce the perceived benefits of formalization (Levy 2008; Alaimo et al. 2015). Thirdly, the benefits of formality are highly dependent on policies and programmes that are not designed, primarily, to encourage formalization, such as small, and medium-sized enterprise support programmes, or the provision of financial instruments to facilitate the emergence of small firms. The provision of cost-effective programmes is key, in that such programmes may stimulate the transition to formality for certain informal firms, particularly in the upper tier of the informal sector.

Conclusions

High levels of enterprise and job informality are considered detrimental to the achievement of broader development goals, which is why during recent decades the analysis of the origins and characteristics of informality, and the design of instruments to foster the transition to formality have played an important role in the academic and policy debate. The adoption of the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204) reflects progress in that debate and has proven a valuable instrument for policymakers.

Informality is heterogeneous in terms of its origins and characteristics. Specifically, an upper, intermediate, and lower tier of the informal economy can be distinguished. Furthermore, it has been found that rather than a polarization between formal and informal firms, a wide range of informality types exists, with complete formality and complete informality at opposite extremes of that range.

That heterogeneity has generated a variety of theoretical approaches which, more than mutually exclusive, may be seen as complementary, with each approach tending to focus on a specific segment of the informal economy. On the other hand, policy advice based on one of those approaches may not be effective in all segments of the informal economy.

Thus, it is widely recognized that strategies to promote transition from the informal to the formal economy must be broad in outlook and must make use of a range of policy instruments appropriate for the characteristics of different segments of the informal economy. In that context it must be recognized that a move on the formality-informality continuum, advancing a step in the direction of more formality, does not automatically promote further steps in the same direction (Chacaltana and Leung 2020).

Strategies for the promotion of formality must also take into consideration the specific circumstances of a country which, at the same time, can bolster or undermine the effectiveness of specific interventions. In Africa, for example,

high levels of informality are generally seen as part of broader development challenges and must be tackled in an integrated way, while general economic development is key to increasing formality. In view of the fundamental role that informal jobs play in the subsistence of a large proportion of the population in many countries, it would clearly be counterproductive to attempt to reduce informality without also establishing a clear path to formality. To seek to impede the creation of informal jobs without offering alternative options would lead to broad social resistance and undermine progress towards a socially and economically more inclusive society. In those circumstances, gradual improvements to the economic foundations of the informal sector and gradual progress towards higher levels of formality would be a more promising approach than trying to force through a transition to formality within a brief time period.⁵⁹

On the other hand, when many jobs in the formal sector remain informal, an appropriate approach might be to consider the costs of formality, more effective labour inspections and sector-specific strategies that take into account the particular characteristics of certain areas of the economy.

In that context, the heterogeneity of the informal economy poses a significant challenge and the designers of a specific policy intervention to promote the transition to formality must define with precision the target groups and objectives of that intervention.

There is, of course, a difference between policies that aim to promote the formalization of firms and policies to promote labour formalization. Efforts to formalize workers tend to be more successful than interventions for firm formalization, but only when their firms are already integrated into the formal economy (Jessen and Kluve 2019).⁶⁰ It may be feasible, however, to start the formalization process by extending social protection schemes to informal workers, an approach that has already been adopted by a number of

⁵⁹ See Mehrotra (2019) for a review of “carrot” and “stick” approaches in efforts to promote the transition to formality in Asia.

⁶⁰ In the domestic service sector, only labour formalization is relevant.

countries (Kiaga and Leung 2020).⁶¹

The evaluation of policy interventions is a key instrument for enhancing the effectiveness and efficiency of public policies and it is applied increasingly by public sector and academic institutions in many countries, as well as by international organizations, as it generates valuable information for policymakers. The design and implementation of policy interventions must be based on transparent political decisions, for which evaluations can provide critical input.

As highlighted in the present report, various evaluation methods can be adopted, ranging from simply counting registration numbers (more an instrument for monitoring progress rather than for evaluation), to techniques that try to establish causalities between specific interventions and changes in outcome variables. Those instruments differ widely in terms of their methodological complexity, their relationship with underlying theories, the resources and data they require, the time frame necessary for their completion, and the reliability of the results obtained. Each evaluation method has particular strengths and weaknesses, and no single method can be recommended for all evaluations of the impact of policy interventions. In some cases, the combination of two or more methods, such as a quantitative experiment complemented by qualitative interviews with representatives of specific groups of interest, can generate useful data.

Among the methods of evaluation, ex-ante and ex-post approaches can be distinguished. Ex-ante approaches can provide input to policymakers regarding interventions that promise a positive impact and help them estimate the potential magnitude of that impact. Ex-ante approaches should be theory based, and the implications of the theory should be easily understood. Indeed, transparency is indispensable, as elements of the theory may be “non-neutral” and predetermine certain outcomes of the exercise, as highlighted in

the review of some evaluation methods. On the other hand, an ex-post approach can be adopted to identify the results achieved by a specific intervention.

In view of the need for an integrated policy approach in efforts to promote the transition to formality, additional challenges arise in evaluations of the results of policy interventions. For example, how can the individual impacts of simultaneously applied measures be evaluated? And is it possible to measure the mutually reinforcing impact of several different measures?

An additional aspect of the heterogeneity of informality relates to firms and individuals, within a specific segment of the informal economy. For example, policy interventions may have different effects on informal workers, depending, inter alia, on their gender, age, or educational level. That heterogeneity should be taken into consideration in any evaluation in order to identify any potential exclusionary effect of the intervention in question that would not be identified by focusing solely on average outcomes.

The fact that there is a formality-informality continuum, rather than a formality-informality polarity, means that an evaluation team must select their outcome variables carefully. Research has demonstrated that it is easier to achieve compliance with certain formality criteria, such as the number of businesses that are registered with the local authorities, than conformity with others, such as registration with the tax or social security authorities (Florida, Demena and Wagner 2020), but clearly this does not imply that the “easier” outcome should be automatically defined as the desired outcome.⁶²

Another consideration that is relevant to the choice of variable used to measure the results of an intervention is whether it is possible to extend the evaluation to the knock-on effects of formalization. Indeed, it must be borne in mind that formalization is not the final goal of an intervention, but a means to achieve results such as improved productivity and profits

61 Indeed, the incidence of labour informality, measured by looking at gaps in social security coverage, might be reduced quite quickly, for example, if a non-contributory scheme were implemented to tackle that issue. However, just one variable does not cover the entirety of labour informality and that policy, while positive for the well-being of workers covered by the scheme, does not imply a complete transition to formality. This underscores the importance of a broader set of indicators on informality and the importance of addressing more than only one specific issue related to that phenomenon.

62 However, as mentioned previously, a focus on registration with the local authorities may have other advantages, including, in particular, the requirement of an annual update.

for firms, higher tax revenue, and improved incomes, rights and protections for workers. While some of those objectives may be achieved automatically (at least, if the obligations linked to formalization are met), such as increased municipal revenues or the protection of workers through a contributive health and pension system, the achievement of others are far from guaranteed.⁶³

Finally, most evaluation methods identify only the short-term outcomes of an intervention.

However, studies of longer-term outcomes have highlighted that those may differ considerably from an intervention's short-term effects. Specifically, Floridi, Demena and Wagner (2020) and Jessen and Kluve (2021) found, on the basis of meta-evaluations, that the long-term outcomes of interventions that promote formalization tend to be more positive than their short-term effects.⁶⁴ Evaluations of the longer-term impact of interventions could therefore generate valuable additional information for policymakers.

63 For example, De Mel, McKenzie and Woodruff (2012) and Benhassine et al. (2016) found no or only limited impact of formalization on those performance variables. Tran and La (2020) detected higher revenues for their whole sample, but not for upper tier firms.

64 This is not always the case, however. Bosch, Fernandes and Villa (2015), for example, found that the positive impact of the intervention that they analysed dissipated after only a few months.

Annex: An analysis of evaluations of formalization policies: selected examples

Introduction

In this annex, three research methods are presented in detail and an explanation is given of how those methods have been applied in specific studies. For each study, we explain its theoretical basis, the method adopted, the assumptions made, its data needs, challenges encountered in the course of the research, and key outcomes. By so doing, we hope to make clear the steps that must be taken in order to replicate the method in other circumstances and we discuss potential outcomes.

The following methods are reviewed:

- General equilibrium models
- Experiments
- Quasi-experiments

As has been discussed, those methods are used in order to identify the outcome of an intervention to foster the transition to formality. Other methods highlight correlations or provide other useful information that can be used to enhance the design of interventions but cannot be used to establish causal relationships between an intervention and changes in relevant variables.

1. An example of the application of a general equilibrium model

Estrades and Terra (2011) applied a computable general equilibrium model to measure the impact of specific policy interventions on job informality in Uruguay.⁶⁵

The authors applied a definition of informality based on non-compliance with social security contributions. At the same time, they considered two firm sectors, namely a formal sector with higher productivity and wages and better labour

conditions, and a low-productivity informal sector that offered jobs that were not in compliance with relevant regulations. As for the main reasons for non-compliance with regulations, the authors cited high formal sector tax burdens and overregulation of the labour market. This suggests that enforcement mechanisms could be used to foster compliance with regulations. The interventions analysed in the study were tax reductions and measures to ensure compliance with rules and regulations associated with formality.

The characteristics of the model and some underlying assumptions included the following: the model worked with 23 sectors, namely the public sector (with fixed employment, as it did not hire, nor dismiss workers), the informal sector, and 21 private formal sectors. It was assumed that the labour supply was fixed. The labour force consisted of three skill groups, with years of schooling as the differentiating variable.

The labour market was segmented, and it was assumed that the informal sector produced for the domestic market, had lower productivity than the formal sectors, and employed low- and medium-skilled workers. The labour market in the informal sector was fully competitive.

The formal sectors employed workers in all three skill groups. The employment level in those sectors was determined by the demand for the goods or services produced by the relevant sector, and when that demand fell, dismissed low- and medium-skilled workers moved to the informal sector. The wages in the formal sectors were efficiency wages, which contributed, through greater effort, to higher formal sector productivity. Workers with a specific skill-level were earning the same wage in any of the private formal sectors.

The data used in the exercise was generated by a social account matrix that had been adapted by

⁶⁵ Additionally, the authors carried out microsimulations to identify the impact of these interventions on poverty and inequality. As the present report focuses on the evaluation of measures to promote the transition to formality, that second aspect is not discussed here.

the authors in order to fulfill the requirements of the model in terms of skill groups and type of taxes.

In order to identify the outcomes of similar interventions, five tax reduction scenarios were considered (all with a tax reduction of 20 per cent): (a) the tax reduction was applied only to unskilled labour and only on sectors that were unskilled labour-intensive; (b) the same sector restriction held, but the reduction was applied also to medium-skilled labour; (c) the reduction was applied to unskilled labour in all private formal sectors; (d) the reduction was applied to unskilled and medium-skilled labour in all private formal sectors, and (e) a 0.75 per cent tax on capital income was applied to scenario (d) in order to maintain the size of the fiscal deficit.

Furthermore, three different enforcement policy scenarios were modelled, in which informal sector firms were required to pay relevant taxes: (a) a less effective enforcement policy (50 per cent increase in enforcement), applied to unskilled and medium-skilled workers; (b) a more effective policy (85 per cent increase in enforcement), applied to unskilled and medium-skilled workers, and; (c) an effective enforcement policy (90 per cent increase in enforcement), applied only to sectors using unskilled labour intensely.

One relevant aspect considered in the exercise was the possibility of substitution, and the authors studied specifically the degree to which the reduction in labour costs stemming from a reduction in taxation on unskilled workers encouraged the hiring of those workers and disincentivized the hiring of higher-skilled workers. That could have two effects. Firstly, a higher proportion of previously informal unskilled workers may become formalized, and secondly, a certain number of medium-skilled workers in formal sectors may find themselves substituted and turn informal.

Another indirect effect considered was the wage decline in the informal sector occurring as a result of the reaction of firms to higher hiring costs stemming from stricter enforcement policies.

Finally, another relevant indirect effect was the fiscal impact of formalization interventions.

The authors argued that a loss of fiscal revenue caused by tax reductions would lead to spending cuts that would have an additional effect on (in)formality, as those spending cuts would undermine public investment. That would restrain growth in the construction sector, one of main hirers of unskilled labour, so that any positive effects of tax reductions on the transition to formality were weakened by the decreased hiring of unskilled workers by (formal) construction firms, unless those tax reductions were offset by a capital tax increase, as modelled in scenario (e).

The model showed that a reduction in payroll taxes reduces informality due to an increase in labour demand that, in turn, leads to the creation of more formal jobs. However, if tax reductions are targeted to reduce the tax burdens on unskilled workers, who tend to experience the highest informality rates, informality among middle-skilled workers increases and the wages of skilled workers fall, with the size of those changes depending on the substitution elasticity among skill groups. An increase in the tax imposed on capital income can decrease informality even more. Increased enforcement of regulations can reduce informality but has undesired effects on poverty and income distribution as it leads to wage cuts for the unskilled.

It can be concluded that general equilibrium models can be used to identify multiple impacts of policy interventions for the transition to formality, and that the application of multiple scenarios can generate useful policy advice. On the other hand, the results are limited by:

- The characteristics of the model and its assumptions.⁶⁶
- The availability of relevant data.⁶⁷

The present report underscores the importance of clearly identifying the target group of the intervention and the relevant evaluation. In this case, for example, the objective of the modelled intervention is the formalization of jobs. The model assumes that informal jobs characterize the informal sector, and that formal jobs characterize the formal sector. In consequence, if an intervention is successful and informal jobs turn formal, it is understood that relevant

⁶⁶ In this model, for example, labour supply is considered static, and unemployment is not considered. This may be questionable if the evolution of informality is linked to an increasing labour supply when a significant proportion of workers are unable to find employment in the formal sector.

⁶⁷ For example, the unavailability of substitution elasticity data for the Uruguayan economy in the cited paper limited the accuracy of the results obtained.

informal economic units transit to the formal sector.⁶⁸ However, in addition to the (in)formality of jobs, both sectors show structural differences, especially productivity gaps, and it is not clear why and how those gaps could be addressed through the formalization of jobs. This underlines the importance of an adequate underlying theoretical model.

Finally, it should be emphasized that the results of this type of exercise do not always generate clear and consistent policy advice. For example, in the case of the presented paper, the authors stated: "... simulations of policies which increase enforcement levels for firms in the informal sector produce a considerable reduction in informality because they tackle the problem directly." (Estrades and Terra 2011: 28). At the same time, the simulations reveal that those policies can have negative effects on wages paid to low-skilled workers, with negative repercussions for poverty and income distribution, which is why the authors also concluded that enforcement policies "should not be implemented as policies to reduce informality."

2. An example of an experiment

De Mel, McKenzie and Woodruff (2012) published research on an experiment to identify the impact of interventions designed to foster the transition to formality. In that case, the objective was the formalization of firms in two cities in Sri Lanka. In addition to the detailed description of the design of the experiment, the paper addressed two interesting issues, namely practical problems arising during implementation of the experiment and the way in which the authors sought to address them, and how data obtained through the experiment were combined with information obtained through qualitative interviews that were key for the interpretation of the experiment's quantitative results.

The authors' conceptual approach was the "exclusion and exit" view discussed by Perry et al. (2007). They thus designed two types of intervention. In order to tackle exclusion from

formality, which is consequence of high costs and burdensome bureaucratic procedures, sometimes aggravated by a lack of awareness regarding the costs and benefits of formalization among informal firm owners, the authors produce an information booklet in collaboration with local institutions on the reasons for registration, the relevant bureaucratic procedures and costs, and other relevant issues. They also offered to pay for most financial costs associated with the formalization process.

According to the exit view, not only the costs but also the perceived benefits of formalization influence the decision to formalize or to continue to operate within the informal economy. An intervention undertaken as part of the experiment was to make a monetary payment that significantly exceeded the costs of formalization, thus linking it to specific, guaranteed benefits.

It should be taken into account that the experiment was limited to existing informal firms with at least one paid employee, thus excluding most of the lower tier of the informal sector which mainly consists of own-account workers.⁶⁹ Furthermore, although the sample included firms with at least one paid employee, the authors' interest was centered on firms with 10 or more paid employees, because in that range the proportion of registered firms is relatively high, thereby facilitating the identification of factors that lead to registration, while most firms with one or two paid employees are usually entirely unregistered.

The informal economic units studied were not in either seasonal agriculture or fisheries, had 1 to 14 paid employees, and had an owner aged 20 to 55 who worked at least 20 hours in the enterprise each week.⁷⁰

Those firms were randomly assigned to one of five groups:

- Group 1: Delivery of the information brochure and promise of reimbursement of registration costs (1,000 Sri Lankan rupees)
- Group 2: Delivery of the information brochure and promise of payment of 10,000 rupees within one month of registration.

68 "Because the enforcement policies require informal sectors to start paying taxes, they become part of the formal sector." (Estrades and Terra 2011: 14).

69 As the authors state, "the vast majority of enterprises have zero paid workers" (p.5). Those own-account workers are mostly unregistered.

70 The authors argue that few of those firms have a female owner, because of which they are excluded. This may have led to the loss of relevant information on the inclusion/exclusion of women from the higher tier of the informal sector and from formalization options.

- Group 3: Delivery of the information brochure and promise of payment of 20,000 rupees within one month of registration.
- Group 4: Delivery of the information brochure and promise of payment of 40,000 rupees within one month of registration.
- Group 5: Control group.

To obtain good estimates of the outcomes of the interventions, steps were taken to ensure a high degree of homogeneity in the five groups. For this, 24 strata were established, with sample firms disaggregated by city (Colombo or Kandy), by industry (retail, manufacturing or services), and by “whether or not they had more than two paid employees, and whether or not in the baseline survey they had said they would register if someone were to pay the costs, and had also said they perceived some benefit to registration.” (De Mel, McKenzie and Woodruff 2012). Within the 24 strata formed in this way, firms were ranked according to their sales. Quintuples of similar firms were then identified in each stratum and distributed among the five groups.⁷¹

Four waves of data collection were carried out. All 520 sample firms were reviewed prior to the experiment. In the three follow-up surveys (some 15, 22 and 31 months after firms were induced to register, respectively) about 89 per cent, 86 per cent and 82 per cent of the original firms were revisited.

In addition to quantitative data, qualitative information was gathered during different phases of the investigation. During the first survey, for example, firm owners were asked, *inter alia*, about their knowledge of the costs and benefits of registration and their willingness to register under certain conditions. In the first follow-up survey, firm owners were asked questions to ascertain their attitudes and levels of trust in order to analyse whether formalization induces changes in that regard. Additional interviews were carried out with firms that were offered the highest payment (group 4), but chose not to register, in order to ascertain the reasons for their decision. Another round of discussions with a specific group of firms took place at the end of the exercise in order to identify the factors that led to the substantially increased profit

margins of those firms after registration.

The experiment was conducted in order to answer the following questions:

- What outcomes do the different treatments have on the registration of informal firms?
- Which types of firm show a stronger response to the interventions?
- How are channels that mediate the potential impact of formality on firms’ profit margins and other outcomes affected by the treatment (for example, their relationship with the financial sector or with public sector institutions, or the use of receipt books or advertising)?
- What is the impact of formalization on firm profits and what factors contribute to increased profits?

A number of challenges, some of which were anticipated and some of which were unexpected, arose during the course of the experiment. Those challenges were addressed as follows:

- To overcome the typical distrust of many small firm owners towards those investigating their formality status, the authors presented a letter with a letterhead of the university in charge of the experiment, and they maintained an “open house” through which firm owners could ask questions regarding the formalization process;
- No sampling frame for informal firms had been developed for the two cities. To address that challenge, five administrative units were chosen randomly in each city. In those units, door-to-door-visits were carried out in order to identify informal economic firms, with the aim of surveying approximately 50 informal business enterprises in each administrative unit;
- The sample size was relatively small (a little more than 100 firms in each group). In order to enhance the accuracy of the estimates, relatively homogeneous groups were created through the establishment of 24 strata;
- A significant number of firms were found to be partially formalized. The authors focused on registration with the administrative subunits known as divisional secretariats “because registration establishes a legal and tax presence, and is the prerequisite for selling to the government and other firms which require registration, as well as for applying for most

71 “Where the number of firms in a strata was not perfectly divisible by 5, the additional firms were randomly assigned within strata to one of the five (...) groups with equal probability.” (De Mel, McKenzie and Woodruff 2012: 10).

bank loans" (p.6), and a large proportion of the firms included in the sample (68 per cent) was found to be registered at the local level. In addition, a significant proportion of firms that were believed to be unregistered had in fact registered with the relevant divisional secretariat. Although registration did not always match the present characteristics of the firm, it allowed firms to bid for government contracts and obtain certain bank services.⁷² As a result, a significant proportion (36.6 per cent) of the firms assigned to one of the treatment groups did not receive the relevant offer and the economic exercise was carried out in two ways, namely by involving all the firms assigned to those groups, or by limiting analysis to the firms that actually received an offer;

- During the research process, a number of firms closed or moved to another location, thereby impeding follow-up. The authors analysed the implications of the reduction of the number of firms covered in the follow-up surveys and found that the reduction in the number of firms did not introduce a bias into the results, as it affected the various groups in a similar manner;
- An external factor (the unexpected declaration of a national holiday) affected the investigation timeline. In response, the deadline for the registration process was extended.

Among the results obtained, the following should be highlighted. Improved information and the reimbursement of registration costs had no effect on registration, while additional payments raised the rate of formalization significantly, with formalization rates increasingly in line with the amount offered. Indeed, 48 per cent of the firms offered the highest amount, namely 40,000 rupees, registered with the authorities. No significant difference was, however, found with regard to the demand to formalize by industry, pre-expressed willingness to register, or baseline size in terms of employment or sales. Firms with a strong growth perspective were found to be relatively more reluctant to formalize because of the higher costs of registration for larger firms. One barrier to formalization was found to be ownership of the land on which the firm operated because of the difficulties and/or high costs associated with obtaining required

landownership papers, particularly if the firm operated on the basis of an informal agreement on land use.

Through three follow-up surveys, the authors discovered that only a few formalized firms were able to increase their profits as a consequence of formalization, while no difference was found between registered and unregistered firms overall. As for intermediate channels, no significant improvements were found in terms of firms' relationships with government agencies or banks, and the only intermediate channels that showed significant changes were the use of receipt books and an increase in advertising. As for prevailing attitudes among firms, the authors found that formalization tended to increase trust in provincial and municipal governments, but not in other public institutions.

The authors concluded that their "results overall suggest little in the way of pent-up demand to become formal among existing firms" (De Mel, McKenzie and Woodruff 2012: 21). According to the authors, this may be due to the fact that the benefits of formalization appear modest, but it might also be related to the limited growth perspective of many informal firms, for which the potential benefits of formalization might be of little relevance. The authors maintained, however, "that modest increases in the perceived benefits of being formal could be expected to dramatically increase the demand to formalize among firms" (De Mel, McKenzie and Woodruff 2012: 20).

The paper and the experimental method reviewed here once again highlight the importance of carefully defining the intervention's target group. It is important to recognize that the majority of informal economic units in Sri Lanka consist of self-employed workers with very low levels of formality. Those units find it difficult to fulfill the conditions for the transition to formality. The experiment excluded those units from the very beginning. Even if economic units with at least one paid employee were included in the sample, the authors underscored that they were interested, primarily, in larger firms, where efforts to foster the transition to formality were more likely to be successful. Thus, while the authors explained their theoretical perspective on informality as following the "exit versus exclusion" approach, they implicitly recognized that a large proportion of informal workers and units, many of which are

⁷² There were a number of reasons for the discrepancy between the original and the definitive identification of firms' registration status, including the fact that some firms had formalized their status during the period of the analysis.

involved in subsistence economic activity, were not addressed by those two explanatory options, as they belong to the lower tier of the informal sector where the costs and benefits of formality are of limited relevance.

This example of an experiment to evaluate the impact of an intervention for the transition to formality is, of course, relatively resource intensive, not only because of the experiment itself (which involves the provision of monetary incentives), but also because of its labour intensity, namely the need to identify a sufficiently high number of firms that comply with the criteria for participation, the costs related to the “open houses” in the two cities to facilitate communication with the target group, and the duration of the experiment (three years between the baseline survey and the final follow-up survey, plus the additional time required for activities prior to and after the experiment). Of course, a less expensive experimental design is possible, but the technical standards as well as specific advantages of this particular exercise, including the follow-up surveys to identify the impact of formalization on firm performance and qualitative interviews to facilitate interpretation of the quantitative results, all increase costs.

3. An example of a quasi-experiment

Bosch, Fernandes and Villa (2015) built on an intervention implemented by Brazilian social security authorities in order to conduct a natural quasi-experiment. The target group of the intervention was self-employed workers, and the objective of the intervention was to increase the number of social security contributions made by those workers. To that end, the intervention focused on workers who were already registered in the social security system. However, contributions by self-employed workers tended to be irregular because of their irregular monthly incomes, which in many cases were too low for social security deductions to be made.

Brazil had previously sought to incentive the registration of self-employed workers by reducing the contributions they were required to pay. Although those initiatives had led to an increase in the number of registered self-employed workers, it exacerbated the State’s long-term fiscal burden, particularly as there was no increase in the frequency with which social security contributions were made.

The new intervention implemented by the Brazilian social security authorities adopted an attitudinal approach: booklets were sent to registered self-employed workers, informing them that a monthly contribution was obligatory, while also informing them about the benefits to which they would be entitled when they had made a minimum number of contributions. To facilitate the payment of contributions, the booklet contained 12 vouchers that could be used to make contribution payments at any bank branch.

The intervention was designed for implementation across Brazil, but for logistical reasons the booklets were distributed in stages across four groups of states. The booklets were distributed in the first group of states in February and March 2014, and in the last group between May and July of the same year.

In their analysis, Bosch, Fernandes and Villa (2015) analysed the effects of the distribution of the booklets on the evolution of the social security contributions by self-employed workers, comparing the evolution in a treatment group of states with other states.

To take into account factors that could influence the outcome in addition to the distribution of the booklet itself, the authors analysed figures generated at the municipal level rather than at the state level, so that they could control for specific municipal trends and monitor the effects at a decentralized level. They also took into consideration a number of key factors, including each state’s GDP per capita and its population. The authors extended the study in order to monitor progress in the months following the intervention.

The authors found that the intervention led to an increase in the number of payments of some 15.3 per cent, while the compliance rate, namely the proportion of registered self-employed workers who made social security contributions, increased by 6.8 percentage points. That difference may be due, in part, to a number of workers who made payments in advance during the following few months by using the vouchers included in the booklet. As was expected (because the target group consisted of workers who had already registered with the authorities) no increase of the number of registrations occurred as a result of the intervention.

The analysis of the impact of the intervention in the months following the distribution of the booklet revealed that the greatest impact

occurred in the month of the distribution and dissipated over the following months, becoming almost insignificant some three months after the intervention. The authors identified that pattern as “action and backsliding”.

Nonetheless, the intervention was cost effective, as the increased contributions exceeded the cost of the intervention by a wide margin. The intervention proved much more financially effective than previous interventions, which had aimed to reduce the contribution quota for the self-employed and, as mentioned previously, had led to a huge reduction in the contributions received by the social security authorities. The authors concluded that innovative mechanisms were needed to ensure that behavioural interventions had a longer-term impact.

A number of challenges arose within the context of the evaluation. Those challenges were addressed as follows:

- The policymakers did not originally consider an evaluation; the authors therefore had to adapt their research to take into account

the pre-defined characteristics of the intervention. As a consequence, for example, no data generation was possible, impeding the interpretation of the results obtained, and the authors had to resort to “informed guesses” and anecdotal evidence in order to draw a number of conclusions;

- The econometric modelling exercise needed to be adapted in order to mitigate the impact of the non-random formation of the treatment groups;
- Surveys showed that some 17 per cent of registered self-employed workers had changed their status (to salaried worker or unemployed) but had not reported that change. It can therefore be assumed that many booklets were sent to individuals who were no longer part of the target group. This affected the results and is likely to have resulted in an underestimation (of unknown scale) of the impact of the intervention.

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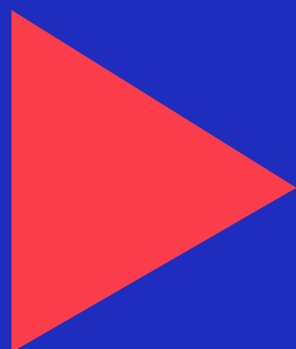
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