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Financing Universal Social Protection:
The Relevance and Labour Market Impacts of Social Security Contributions

Florencia Calligaro and Oscar Cetrangolo

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Because the authors have greater knowledge of the situation in Latin America, the examples used are mainly from that region. An attempt was made to expand the coverage of the study to other parts of the world based on the valuable collaboration of ILO experts. The responsibility for the content rests exclusively with the authors.

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Abstract

It is often argued that informal employment structurally limits the ability to organize social protection systems primarily on the basis of contributory social insurance. The prevailing view is that a mix of funding sources through social security contributions and taxes is needed to achieve universal coverage. The composition of that mix, however, is highly contested. Recently, international organizations and academics have suggested reducing or even abolishing social security contributions and replacing them with general taxation. The argument is to create incentives for the formalization of the economy. Misguided policies in this respect could potentially lead to adverse distributional outcomes and threaten social protection systems' sustainability by constraining one of their most relevant and stable flows of resources.

The objective of this paper is to evaluate the validity of these arguments by bringing together existing evidence on the impact of social security contributions on labour markets, insights from public finance theory and experiences of countries that have reduced social security contributions in an effort to increase formal employment. This paper shows that social contributions are one of the main sources of financing for public policy, which have remained a stable source of financing in the 21st century. The available evidence does not show a clear pattern between contribution rates and informal employment. The literature suggests that the reduction of informality does not depend primarily on the magnitude of contributions. Instead, it requires a broad and coherent set of measures that support the creation of new formal jobs and the registration of informal workers. Most empirical studies find that contribution cuts fall mostly on workers' wages. Thus, there are no significant employment or formalization gains in reducing contribution rates. At the same time, any reduction in social security contributions creates an effective loss in government revenue in the short term, limiting the fiscal space for implementing public policies that aim to reduce poverty and inequality. Moreover, since informality makes it difficult to collect employment-linked taxes, replacing contributions with other taxes (such as income or value-added tax) could be regressive and lead to greater imbalances on the macroeconomic front, as illustrated by many of the cases reviewed in the paper.

Introduction

Countries, especially developing countries, face multiple and complex social and economic challenges. The need to reduce income inequalities, achieve more cohesive societies, consolidate economic growth, and ensure the sustainability of public policies in the medium term are some of the demands that often give rise to debates on the best paths for reform. Labour market dynamics in countries with a high share of informal employment oblige policymakers to consider complementarity of a variety of initiatives, promoting debate in adapting the contributory financing of social protection.

Unlike other public policies, the adopted modality for financing social protection programmes influences their institutional organization and incidence. Since the end of the 19th century, there have been different points of view on the design and scope of schemes based on contributory financing. Historically, contributory social security has sought to guarantee workers and their families social minimums and ensure the replacement of income and the maintenance of purchasing power if a contingency interrupts or reduces income generation. These benefits depend on the contribution history and income level of the beneficiary.

At the same time, there is a broad consensus that non-contributory schemes and programmes play a key role in achieving universal social protection. The high and persistent levels of informal employment in many developing countries leave a large part of the population unprotected against the reduction in income from work due to various contingencies. Therefore, tax-financed benefits are essential for people not entitled to contributory social security benefits. The International Labour Organization (ILO) promotes a two-dimensional strategy for the extension of social protection guided by pertinent international labour standards – Social Security (Minimum Standards) Convention, 1952 (No. 102); Social Protection Floors Recommendation, 2012 (No. 202), and others – that gives a significant role to contributory social insurance schemes along with non-contributory benefits and programmes. Together, they define a 'social protection floor' that extends basic social security guarantees to all as part of a national social protection system and progressively ensures higher levels of protection in line with Convention No. 102 and other international social security standards.

An equitable and sustainable financing strategy is based on both social security contributions and taxes, a combination that promotes the different objectives pursued by social protection systems (in terms of coverage, adequacy, comprehensiveness, and redistribution, among others). The ILO also strives for the extension of social protection by facilitating the transition of workers and economic units from the informal economy to the formal economy in line with the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204).

During economic crises (including COVID-19), the debate on the most appropriate mix for social security financing tends to grow. In these contexts, it is common to find proposals to reduce costs for firms, including social contributions. Misguided policies in this respect could potentially lead to adverse distributional outcomes and threaten social protection systems' sustainability by constraining one of their most relevant and stable flow of resources.

Some international financial institutions and other international organizations have criticized the role of social security contributions as a source of financing for social protection. They have argued that social contributions produce disincentives to formal employment and contribute to the informality of jobs and enterprises, thus damaging productivity and GDP growth. This view suggested a shift in the financing for social protection from contributions to general taxation (mainly value-added and income taxes). In this regard, ILO (2018) has expressed its concern over this proposal since it would weaken one of the fundamental elements of social protection systems.

This paper addresses the role and relevance of social contributions in social security systems. Also, it seeks to provide an overview of what we know about the effects of social security contributions on employment and informality, both from economic theory and empirical evidence. Empirical studies of impacts of cuts of social contributions impacts are not easy to find, which indicates the need for further research. However, the available evidence does not show a clear pattern between contribution rates and informal employment. This finding suggests that the reduction of informality does not depend mainly on the magnitude of contributory financing. Instead, it requires a broad and coherent set of measures that support the creation of new formal jobs and the registration of informal workers.

Following this introduction, the paper is structured as follows. Section 1 sets out the relevance of social security contributions in financing social protection systems and describes the main trends

in global and regional social security contributory revenues. Section 2 presents the effects of social contributions on the labour market and employment, their impact on the supply and demand curves, and other factors that must be considered for a comprehensive incidence analysis. Section 3 reviews the empirical studies on the impact of cuts in social contributions on employment and informality. Section 4 discusses the recent developments in social contributions for different countries and offers a categorization of cases in which contribution cuts have been put into practice. The final section analyzes the key findings.

1. The relevance of social security contributions in the financing of social protection systems

Social security is the set of public policies and programmes designed to reduce and prevent poverty and vulnerability throughout the life cycle. It includes child and family benefits, maternity protection, unemployment support, employment injury, sickness, and health protection, as well as old-age, disability, and survivors' pensions[1] (Ortiz et al., 2019). Thus, the main classical functions of social security are, on the one hand, to guarantee social minimums and, on the other hand, to ensure the substitution of income and the maintenance of purchasing power in the event of a contingency that interrupts or reduces income generation.

1.1 Introduction to the reasons that justify contributory financing

Social protection systems typically include a mix of public social insurance and social assistance (funded from the government budget) (Ortiz et al., 2019). Contributory schemes are financed by compulsory contributions made by employers, workers and the State.[2] These contributions entitle workers to receive a contingent future social benefit. In most cases, the amount of the benefit depends on the beneficiary's contribution history and income level.

At its inception, social security systems were based on a contributory regime with the aim of pooling risks (ILO, 2001). This approach pursues vertical and horizontal redistribution since it allows for poverty prevention, income redistribution and risk pooling within and between generations. In addition, most countries have social assistance to support the incomes of individuals who are ineligible for contributory social security benefits (including those whose accrued rights in a contributory scheme fall below a certain minimum threshold).

The largest branch of social security (in terms of resources) is usually old-age insurance. From the early stages of their development, pension systems responded to the central concern of ensuring consumption-smoothing across the life cycle by reducing consumption while individuals are economically active to allow them to keep consuming during retirement (Barr and Diamond, 2008; Bertranou et al., 2019; ILO, 2010). It makes sense to organize provision for retirement in the form of insurance, as the risk is different for each individual and it is possible to predict average life expectancy for a large group of people (Barr and Diamond, 2008). This argument is one of the most relevant reasons underpinning pension systems in the form of insurance through which those unable to work (including old age) can receive a benefit based on their history of contributions to social security during their active years. Thus, social security is awarded without an income or wealth test but based on previous contributions.

Pension systems can pursue multiple objectives, including smoothing consumption and alleviating poverty (for example, with a minimum income guaranteed by the State) (Barr and Diamond, 2008). The ultimate organization of a pension system is defined over a set of dimensions that include how the scope of legal coverage is specified, conditions of access to benefits, financing, and administration, among others. Often, systems comprise different components or pillars, which allows the various objectives to be tackled with multiple instruments and organization, administration and financing[3].

Each of the branches included in the social security programmes requires specific considerations. For example, unemployment insurance schemes protect employed individuals against the risk of job loss while ensuring adequate incentives to work. They provide income support, usually conditional on job-search requirements or

[1] It is worth mentioning that the family benefits contingency takes a somewhat different logic, less related to labour income disruption and more to the needs for income support that derive from family needs, as a function of the demographic composition of the family.

[2] State contributions can be made as an employer, or as other type of contributions (e.g. to finance solidarity components embedded into the system or to cover possible shortfalls of revenue).

[3] See Bertranou et al. (2011) for an explanation of each system type.

participation in labour market policies to facilitate job search and skills development. These schemes can be accompanied by unemployment assistance.

The use of social contributions in health insurance financing requires some caveats. The justification for differences in benefits related to labour (between formal and informal workers and their families) or income level is weak and highly debatable, as many reforms in Latin American countries have shown (Titelman et al., 2015). Universal health coverage implies that all people have access, without discrimination, to comprehensive, appropriate and timely high-quality health services determined at the national level according to needs. Also, it means that all people have access to safe, effective and affordable medicines while ensuring that such services do not expose users, especially groups in conditions of vulnerability, to financial difficulties. From this perspective, progress towards universal access to health care requires efforts to overcome exclusion, inequity and barriers to access, while achieving timely use of comprehensive health services (PAHO, 2014). However, the financing structure of health-care systems could constrain the achievement of universal health coverage. In this case, it makes sense to implement a solidarity-based scheme in which participants contribute according to their means and have access to the benefits of the health-care system irrespective of their contribution to its financing (that is, they receive benefits according to need). In countries where public sector resources are scarce, social contributions are crucial for financing the health-care systems and complementing tax revenue to pursue universal coverage.[4]

It is worth noting that social contributions are considered a special case of payroll tax in public finance theory. To a first approximation, payroll taxes are considered an inferior form of taxation compared to income tax, or rather an inefficient tax with which to finance public spending in general (Musgrave et al, 1987). But if a different framing is used, they are considered as social security financing.[5] On the one hand, if employers perceive a strong tax-benefit linkage, the efficiency loss (in terms of employment) should be mitigated. On the other hand, if workers do not understand that their contributions give rights to future benefits, they will perceive them as no different from income taxation (Bozio et al., 2019).

Then, there are several reasons why payroll or employee compensation is used as the tax base for financing most social security programmes: (i) the relative administrative and operational ease of payroll-type taxes, (ii) the possibility to link benefits to the worker's earnings and tax payments, with desirable incentive effects on formalization, (iii) a preference to confine the costs of the programme to those who will benefit, as well as to limit the benefits to those who have been working, (iv) the relative security and stability of a programme that has its own earmarked funds and does not have to compete in the annual budget allocation process, and (v) the political support for programmes where the public can see what it is receiving for what it is paying (relative to other public expenditures) (Kesselman, 1996).

1.2. Social security contributions around the world

Social security contributions play a key role in financing social security. Globally, social security contributions accounted for 18.8 per cent of total taxation or 5.7 per cent of GDP in 2019[6]. Social security contributions in Europe and Central Asia represent more than 27 per cent of total taxation. At the same time, they are relatively less important as a source of financing in Africa, Asia and the Pacific (Figure 1).

Currently, 176 of the 195 countries and territories surveyed by the ILO have a contributory pension system regime (either alone or in combination with a non-contributory regime), while 120 countries and territories have non-contributory regimes. These figures indicate that contributory schemes have a high degree of adherence around the world (ILO, 2021b).

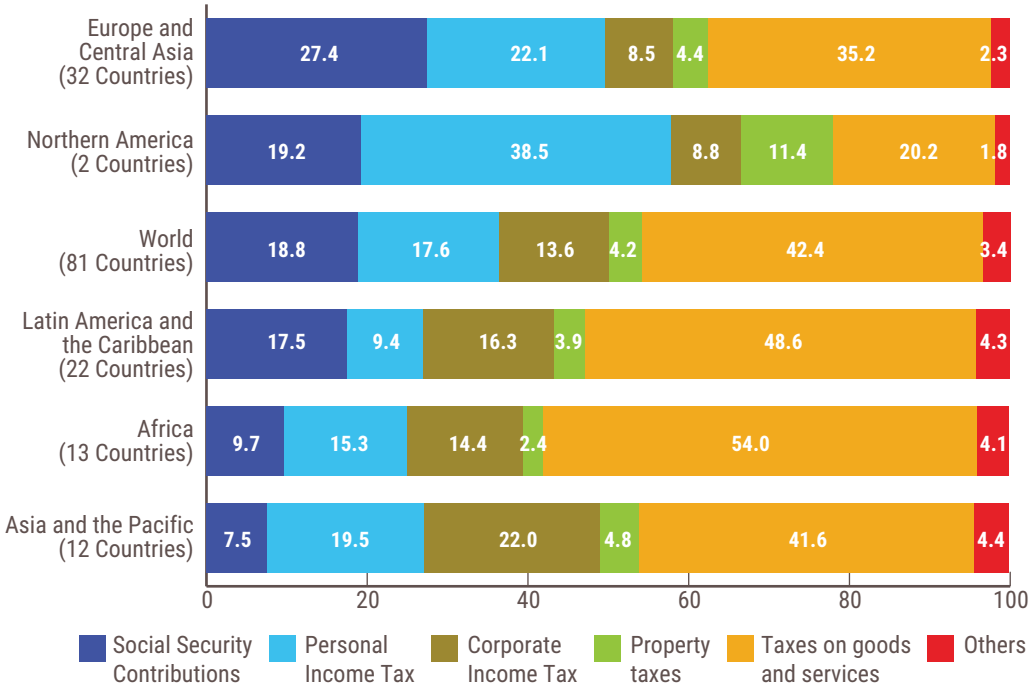
In the 21st century, social security contributions have remained a relatively stable source of financing. From 2000 to 2019, total tax revenue raised 2.2 percentage points of GDP, showing a slow but steady increase after the global financial crisis of 2009. Social security contributions as a

[4] Additionally, the existence of some programmes financed by payroll contributions by employers should be considered. Among them, maternity benefit schemes stand out to mitigate discrimination against women of reproductive age. These programmes are usually very important in Africa, Latin America, the Middle East and Central Asia.

[5] It should be noted that, in response to this necessary differentiation, the IMF Government Finance Statistics Manual establishes: "If a tax on payroll or workforce is designated for use in a social security scheme, then it is classified as a social security contribution." See IMF (2014), p. 87. Bearing in mind the objective of this paper, the denomination of payroll taxes will be maintained here when it is required to refer to the base on which the contribution is levied.

[6] Figures on total tax revenue presented in this section include social contributions. For more details, see Annex 1.

Figure 1. Social security contributions and tax revenues by region, 2019 (in percentage of total)

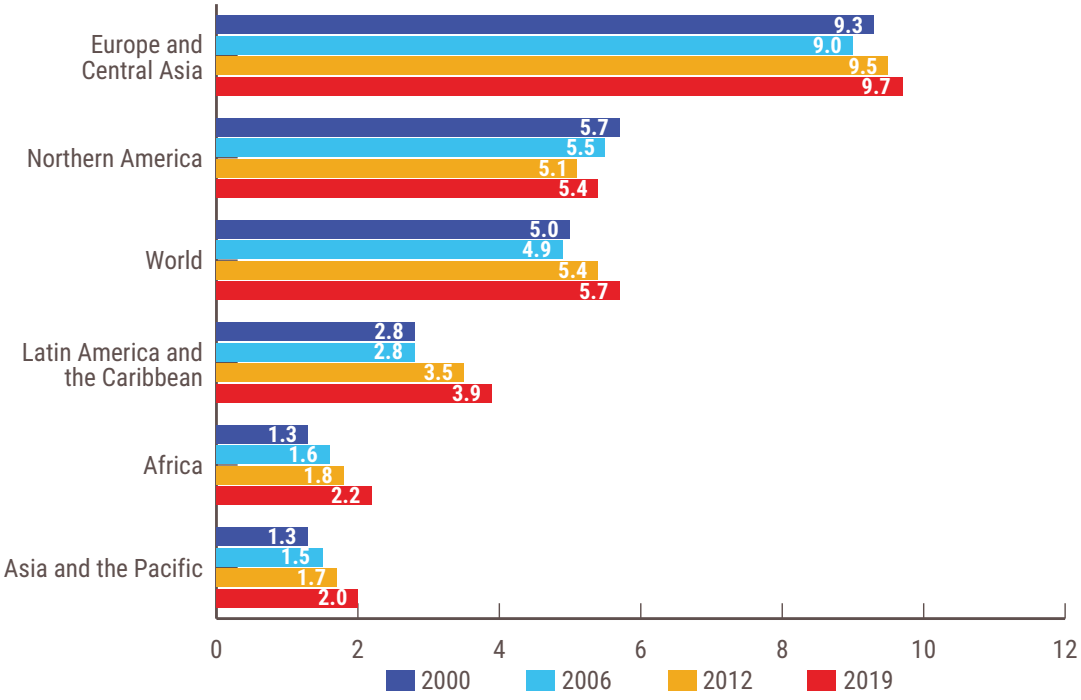


Source: OECD, Global Revenue Statistics Database.

share of GDP increased by 0.7 percentage points in the same period (Figure 2).

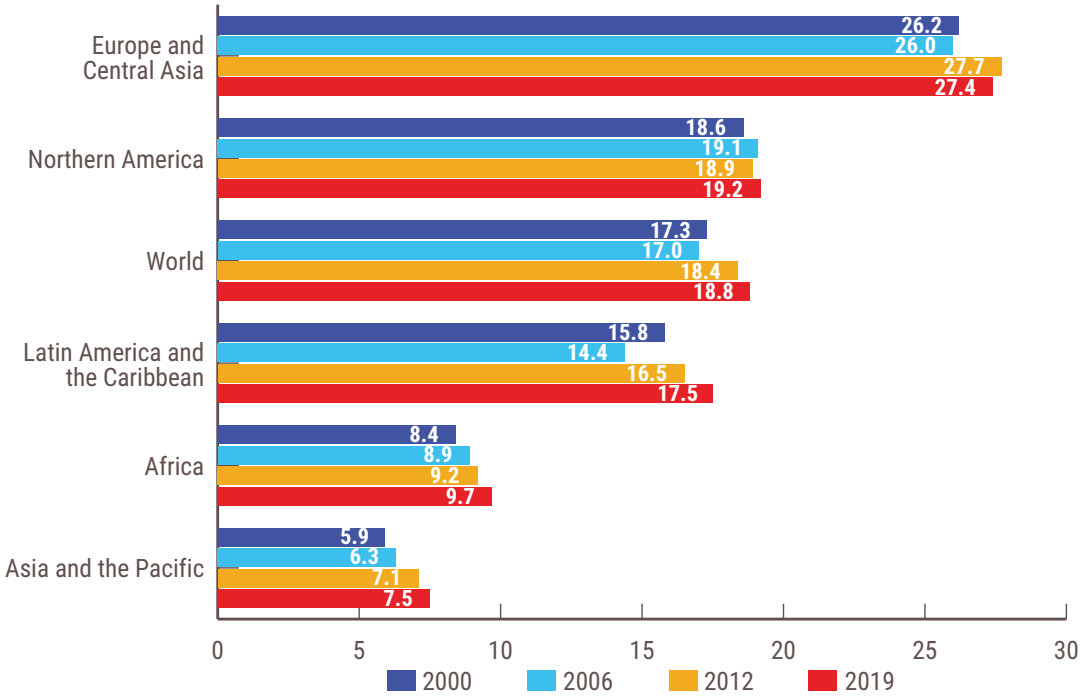
There are significant differences across and within regions (Figure 3). In Europe and Central Asia, social contributions represent 27.4 per cent of tax revenues and are the highest in the Czech Republic and the Slovak Republic (44.2% and 43.4%, respectively). Also, Asia and the Pacific exhibits low social security revenues (7.5% of tax revenues) since some countries of the region

Figure 2. Evolution of social security contribution revenues in percentage of GDP



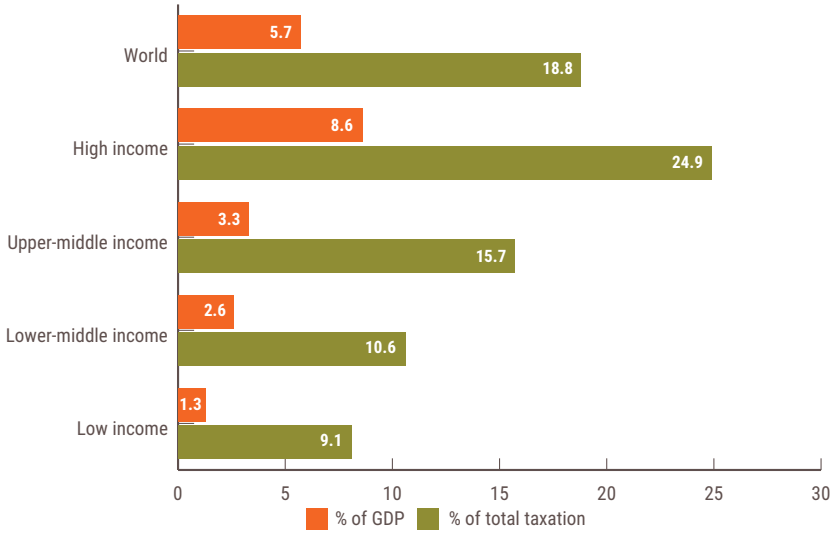
Source: OECD, Global Revenue Statistics Database.

Figure 3. Evolution of social security contribution revenues in percentage of total taxation



Source: OECD, Global Revenue Statistics Database.

Figure 4. Social security contribution revenue by income level, 2019 (in percentage of GDP and in percentage of total taxation)



Source: OECD, Global Revenue Statistics Database.

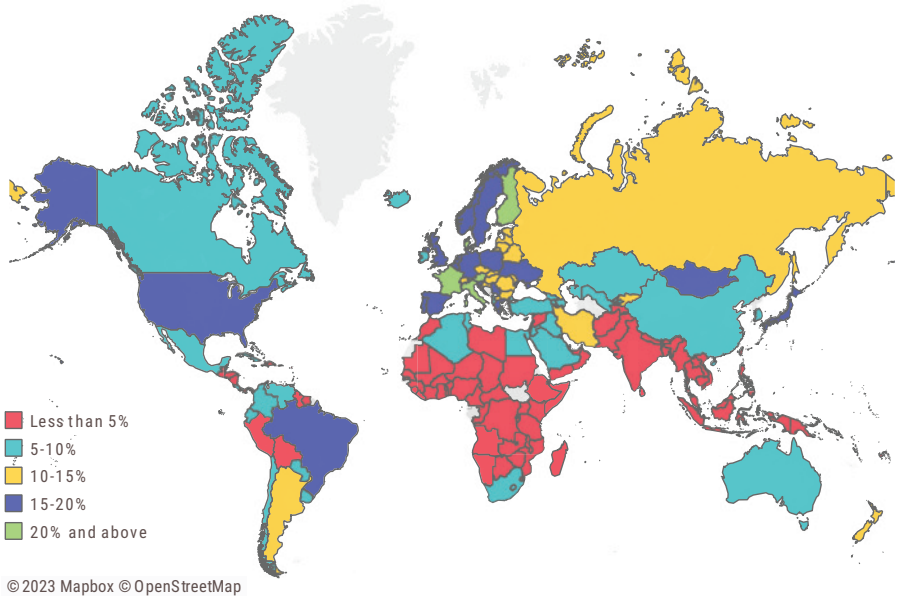
do not levy social contributions (Australia, Bangladesh, Bhutan, New Zealand, Papua New Guinea, Singapore and Vanuatu).[7]

As shown in Figure 4, high-income countries collect on average 8.6 per cent of GDP through social security contributions, almost seven times as much as low-income countries (1.3%). Social contributions account for one-quarter of total tax revenues in high-income countries. On the other hand, in upper-middle, lower-middle and low-income countries, social contributions are 15.7%,

[7] Countries worldwide exhibit different degrees of private health-care and pension systems, and contributions to private institutions are not included in social security contributions revenues. Thus, the relative participation of the private and public sectors affects the tax-to-GDP ratios.

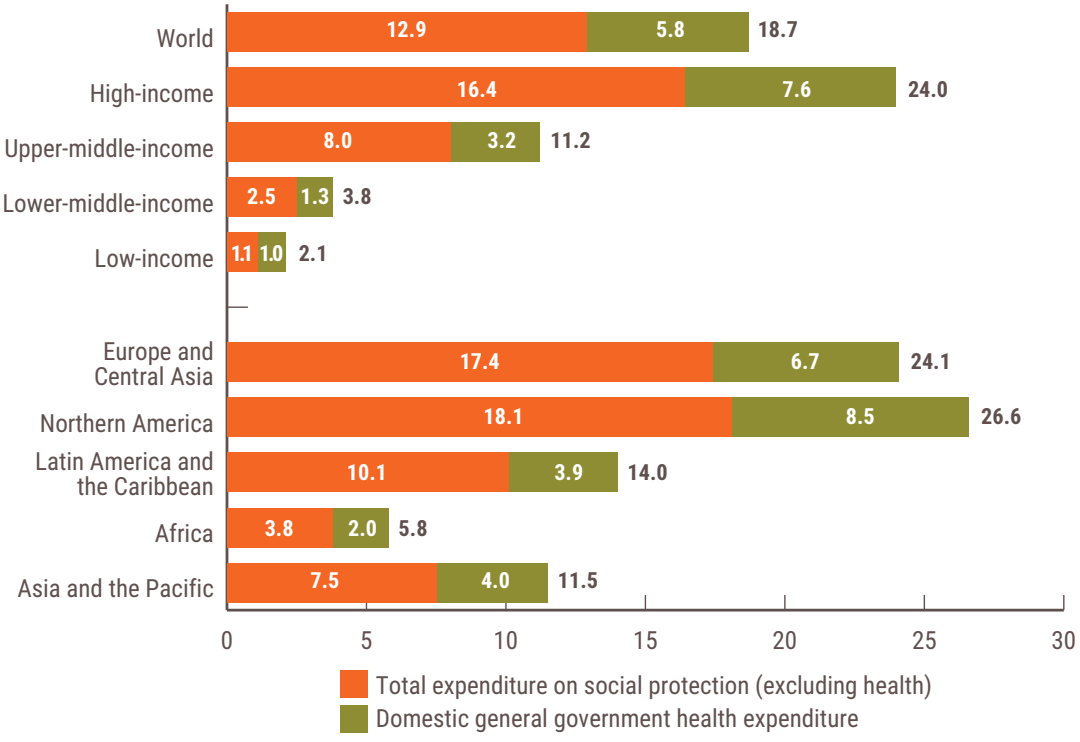
10.6% and 8.1% of total tax revenues, respectively. This illustrates the importance of contributory social security especially in those countries where labour informality is lower.

Figure 5. Public social protection expenditure (excluding health)



*Note: The descriptions on this map and the data presented do not imply the expression of any opinion by the authors concerning the legal status of countries, territories, cities, or areas, their authorities, or their border or limit layouts. * Taiwan (China), Hong Kong (China), and Macao (China) appear without prejudice to the question of sovereignty. Source: ILO, World Social Protection Database, based on the Social Security Inquiry (SSI), the International Monetary Fund (IMF), the Economic Commission for Latin America and the Caribbean (ECLAC) and national sources.*

Figure 6. Public social protection expenditure (excluding health), in percentage of GDP, 2020 or latest available year and domestic general government health expenditure, percentage of GDP, 2018, by region, subregion and income level (in percentage of GDP)



Note: global and regional aggregates are weighted by GDP
Source: ILO World Social Protection Database, based on the SSI, the IMF, ECLAC and national sources.

High-income countries spend on average 16.4 per cent of GDP on social protection[8] (excluding health care), twice as much as upper-middle-income countries (which spend 8%), seven times as much as lower-middle-income countries (2.5%) and 15 times as much as low-income countries (1.1%) (Figures 5 and 6).

On the one hand, countries such as Italy, France, Finland, Denmark and Austria have spending levels in social protection (excluding health care) above 20 per cent of GDP. On the other hand, 30 countries spend less than 1 per cent of GDP on public social protection. Gaps in coverage, comprehensiveness and adequacy of social protection systems are associated with significant underinvestment. For instance, in Africa, the Arab States and Asia, public social protection expenditure remains below 10 per cent of GDP and, by coincidence, social contributions have a smaller role.

From 2000 to 2017, total pension expenditure (public and private) increased by 1.5 per cent of GDP on average among Organization for Economic Co-operation and Development (OECD) countries. Ageing in the population contributed to raising pension expenditure, which was partially offset by strong labour market performance in many countries, especially among older workers (OECD, 2021).

According to recent studies, developing countries would need to invest 3.8 per cent of their GDP annually to guarantee a universal social protection floor for all (including health care) by 2030. Increasing revenue from social contributions may provide up to one-third of the resources needed to finance the universalization of the social protection floor in developing countries by 2030 (Duran-Valverde et al., 2020; Razavi et al., 2021).

2. Effects of Social Security Contributions on Demand for and Supply of Labour

The arguments for and against modifying the contributory financing of some social spending programmes generally revolve around the effects of social contributions on the labour market. Here, we introduce the theoretical framework for the analysis and then review the positions of academics and the international community on the role of contributions in social protection financing.

2.1. What does economic theory say?

The simplest incidence model for social contributions or payroll taxes within a neoclassical framework assumes perfectly competitive labour markets. Employers and workers take wages as a given and choose how much labour to demand or supply. To make their decisions, employers consider their average labour cost, comprising the wage paid to their employees and payroll taxes or contributions. On the other hand, workers decide how much labour to supply based on their wages after paying contributions. In this simple model, employers' demand for labour equals workers' supply for labour at the market-wage.

According to this approach, increases in employer contributions can be shifted partially or fully to employees by reducing wages. The larger the employer's demand elasticity (that is, as labour demand is more responsive to changes in wages and earnings) and the lower the employee's supply elasticity, the larger the wage reduction. On the other hand, when payroll taxes or contributions are levied on workers, they can shift the tax burden on their employers by negotiating higher wages. The wage increase is higher when labour supply elasticity is higher and labour demand elasticity is lower. Ultimately, the incidence of the tax change depends on labour demand and supply elasticities and not so much on the statutory burden of the tax.[9]

Nevertheless, the real world is more complex than this model would suggest, especially in the case of highly informal labour markets. On the one hand, if the formal sector supply exceeds the demand at current wages, the worker may be forced to accept a contract that excludes social protection rights and may be obliged to collude with the employer (Gillion et al., 2000). On the other, if workers perceive a strong link between their contributions and future benefits, they will consider their contributions as deferred salaries. In this scenario, changes in taxes should be fully shifted from firms to employees' wages, with no effect on employment. Hence,

[8] Social protection expenditures are financed by contributions and other sources of revenues.

[9] The alleged differentiation between the effects of the contributions on the workers or on the employers has generated many unfounded discussions. This is essentially a denomination problem, as the effects of both parts of the tax on the payroll are equal. However, as Brittain points out, it is usual to find references or reform proposals where they are differentiated without much substance from a tax incidence standpoint (Brittain, 1987, p. 194 ff.). As Musgrave states, the final incidence of charges will depend on the structure of markets, in addition to the perception that workers have of the future benefits of these charges (Musgrave, 1985, p.553).

to assess the effect of contributions on labour markets, it is relevant to study how workers value their social insurance benefits.[10]

In this regard, Barr (1998) points out that if workers discount future benefits entirely, contributions have the same effect on labour supply as an income. Similarly, if future benefits bear an actuarial relationship to contributions (and are perceived to do so), contributions are not a tax but simply the price of insurance, with little distortionary effect on labour supply.

The framework described above relies on a simplified model in which taxes or contributions are proportional to workers' compensation, and all remuneration is subject to tax. In practice, these taxes and contributions usually exclude some compensation components and may not be proportional to the worker's income. Different marginal and average tax rates will produce distinct income and substitution effects, thus affecting the burden of taxes and contributions (Carloni, 2021).

Contributory insurance schemes usually include some redistributive components among formal workers. For instance, minimum and maximum pensions favour low-income over high-income workers. Also, different accrual rates among men and women seek to reduce the gender gap.

A situation that should be subject to careful analysis happens when the contributions of workers who do not meet the requirements to access benefits are used to finance the benefits for those workers who do. In this case, contributory benefits are financed by payroll taxes paid by workers in semi-informal employment (those that do not reach the benefits despite having paid contributions). Some countries, such as Colombia, have established a mechanism to return those contributions to workers who are not entitled to access contributory benefits.

When there is no relationship between the payroll tax paid by a worker and social security benefits received, public finance theory holds that the payroll tax is one of the least appreciated taxes from an equity standpoint. It imposes an additional tax on salary income, excluding capital income (Musgrave and Musgrave, 1992, p. 553), and is a uniform, personal tax that does not consider each worker's condition (Musgrave, 1987, p. 175).

As will be seen later, some countries have introduced social security payment offsets or social security subsidies to encourage employers to hire new workers (or keep employees who might otherwise have been laid off). These programmes are often associated with deadweight losses and substitution effects,[11] such as subsidized workers replacing unsubsidized workers, or employers hiring subsidized workers and laying them off once the subsidy period ends (Betcherman et al., 2004). Moreover, reductions in labour costs may not create new jobs if employers are not convinced that such reductions are permanent.

Ultimately, many factors determine the incidence of social contributions in employment and informality rates that should be considered when debating and designing changes in public policy. Some of the most important are the elasticity of labour demand and that of labour supply, the workers' valuation of the benefits they receive for their contributions, the design of the tax, the existence and the level of minimum wages, workers' bargaining power and the state of the economy.

2.2. The positions of international institutions and experts on the role of contributions in social protection financing

The large share of the informal economy and, more precisely, informal employment is a structural feature of Latin American and other developing countries. This matter constitutes the core of the difficulties in expanding access to the different components of social protection and its financing (ILO, 2021a). The search for solutions to extend rights to social protection, strengthen contributory schemes and consolidate their social protection floors is a central concern for the ILO, governments and social actors (ILO, 2021b).

Taking the Universal Declaration of Human Rights of 1948, the ILO has established the goal to extend social security and income guarantees, as well as other social protection measures. The Social Security Convention, N° 102 of 1952, sets forth minimum standards and principles of sustainability and good governance for the nine branches of social security defined therein. In turn, the Recommendations on social protection floors N° 202 of 2012 and the Transition from the Informal to the Formal Economy Recommendation N° 204 of 2015 provide guidance on the promotion

[10] Employers may also see the benefits of hiring formal workers.

[11] Deadweight loss refers to the loss in economic efficiency in terms of social welfare due to taxes or subsidies. Substitution effect means that the programme's outcomes in terms of employment are no different from what would have happened in the absence of the programme.

of social protection schemes that ensure universal coverage and adequate benefits within a framework of financial, economic and fiscal sustainability, guaranteeing gender equality and social dialogue in the transition from the informal to formal economy.

Since the second half of last century, there has been an ongoing debate over the best instruments to finance the growing social protection expenditure. A World Bank report (1994) promoted "multipillarism" to rearrange pension systems that pursue different individual and collective objectives. The first pillar should guarantee poverty alleviation and a certain level of redistribution. A second pillar would play the role of insurance and savings to guarantee consumption-smoothing through benefits, with an adequate replacement rate of labour income. This way, a multi-pillar scheme is intended to spread the risk involved in designing a pension system based on a single pillar that pursues both individual and social objectives (Bertranou, 2005). Third, market-based "nudged" or purely voluntary savings would enable people to contribute more if desired.

At the time, there was great controversy about the way the second pillar should be structured. The organizations that promoted the Washington Consensus, such as the World Bank, suggested adopting a system of privately managed individual pension savings accounts. Other agencies, such as the ILO and the International Social Security Association, argued for publicly administered defined benefit schemes (Gillion and Bonilla, 1992; Mesa-Lago, 1996; Gillion et al., 2000).

More recently, the World Bank (2019) has stated that the "*contributory approach is not a good fit for developing countries, where formal and stable employment is not common*" (p. 113-114). In this view, the contributory approach excludes a large share of the workforce (workers in informal employment) and is unsuitable for the changing nature of work, where "*traditional employer-employee relationships are no longer the norm.*" Also, they have argued that "*there is a risk of creating incentives for workers to remain in the informal sector, particularly where the link between contributions and benefits is not viewed favorably by workers. This latter effect may be especially relevant to women whose interrupted careers may make it difficult to reach the minimum number of years of service needed to accrue a pension but who nevertheless contribute.*" (World Bank, 2022; p. 71).

According to Packard et al. (2019) and Baeza and Packard (2006), a comprehensive package of "insurance assistance"[12] should be financed by general tax revenue since "*payroll taxes have a negative impact on formal sector employment*" (Packard, 2019; p. 207). They do not distinguish between payroll taxes and social contributions, and argue that as populations age, required contribution rates can reach high and damaging levels, so firms and workers have greater incentives to evade contributions.

In the same direction, Levy (2008) proposed replacing social contributions with consumption taxes for the case of Mexico. The author argues that social contributions in Mexico reduce salaried employment, decreasing capital productivity and leading to a lower GDP growth rate. He then proposes to provide all workers with universal social entitlements financed by consumption taxes and eliminate wage-based social security contributions. His proposal rests on two arguments. First, consumption taxes create fewer distortions (in terms of the distribution of employment, the composition of output, and the allocation of investment) than a tax on salaried workers accompanied by a subsidy to non-salaried workers. Second, with an appropriate combination of consumption taxes and subsidies, the government can also achieve the objective of redistribution. According to Levy, revenues would increase significantly over higher value-added tax revenue (by eliminating special regimes and increasing the VAT rate) and higher firms' income tax due to the reduction in tax evasion.

Moreover, a series of documents published recently by the United Nations Development Programme (UNDP) link the disappointing performance of social protection to the alleged distorting effects of social contributions on labour markets. For example, Levy and Cruces (2021) analyze the impact of social protection policies in Latin America on two dimensions: their efficacy in protecting households against risks, reducing poverty and mitigating inequality; and their effect on productivity and long-term growth. Authors argue that social protection policies provide insufficient and erratic protection against risks, do not redistribute enough, and hurt productivity. They propose a change in the financing of social protection, lowering the importance of wage-based contributions and raising that of other taxes towards universal social protection. It should be noted that Levy and Cruces (2021) state that they cannot assert that, on a country-by-country

[12] The term "insurance assistance" is ambiguous and confusing. That is why the term used in the World Bank publication is kept here in quotations.

basis, extra revenues would match the need for higher spending on social protection. Additionally, Ñopo (2021), Ñopo and Barinas (2021a) and Ñopo and Peña (2021b) study social protection systems in Peru, the Dominican Republic and Ecuador, respectively. They allege that overlapping contributive and non-contributive components lead to low levels of effective protection, high informality, and low productivity for firms. Therefore, the authors propose substantial reforms in financing social protection. Specifically, Ñopo (2021) suggests decoupling social security from formal employment in Peru to remove disincentives to formal work and change the source of financing for social security from contributions to general taxes. Also, Ham et al. (2021) argue that the social insurance system is responsible for the malfunctioning of the social protection system in Honduras. They encourage the adoption of universal social protection, by eliminating social contributions and raising other taxes.

Although social protection is not officially part of the IMF's priorities, it has received increasing attention from the Fund as an important contributor to macroeconomic stability (IEO, 2017). After the global financial crisis of 2008, the IMF started to include a reference to "social safety nets" and promote social spending, mainly on health and education (De Schutter et al., 2021).

In a document published by the IMF, Delechat et al. (2021) point to the tax system design – and social security contribution burdens – as one of the root causes of informality. They maintain that: "*It is generally recognized that simpler value-added and corporate tax systems (with lower rates and no or minimal exemptions and loopholes), as well as low payroll taxes, help reduce informality. Supportive social protection systems, including progressive income taxes and protection for the poorest, help address distributional aspects.*" (p. 5).

In the context of the COVID-19 crisis, Razavi et al. (2021) explore the IMF recommendations by examining the country reports for IMF programmes in 2020. The Fund has provided advice on social contributions in 21 of 138 reports. In some cases, they supported their deferral or temporary reduction to alleviate the impact of the crisis on enterprises and employment. In other cases, the IMF supported increasing social contributions to finance extraordinary expenditures and reducing transfers from the government budget to social security schemes. It should be noted that these recommendations were made in the context of a historical crisis.

Ultimately, the main arguments presented by those who suggest replacing social contributions with general taxation for the financing of social protection are: (i) to create incentives for the formalization of the economy, promoting productivity and GDP growth (which assumes that social contributions incentivize informality, reduce employment and productivity, and harm GDP growth), (ii) to make the system less regressive (which assumes that tax systems are more progressive than social contributions, and that rents and profits can be effectively taxed or that income tax is less easy to evade than social contributions), and (iii) to enlarge the population for risk pooling. On the last point, the risk of losses would be pooled across the entire tax-paying population, constituting a larger share of the population than employers and formal workers. The whole society becomes a single risk pool.

In this regard, the ILO (2018a) has shared its concerns over this proposal since it would weaken the fundamental elements of social protection systems. Social assistance can only be redistributive and promote inclusive growth in the presence of a strong mix of labour market regulation and public social insurance schemes that relieve the pressure on social assistance. Social protection floors need to be complemented by schemes that provide adequate protection to large population groups, usually achieved through social insurance schemes.

More importantly, as the ILO (2018a) points out, the mentioned report of the World Bank (2019)[13] "*lacks substance on how the extension of coverage and benefits to the broad majority of the population, including the working and middle classes, will be achieved in developing countries.*" The World Bank failed to show how developing countries would successfully transition from a limited "safety net" approach to a fully fledged Universal Basic Income, also proposed in the report, that would be sufficiently high to prevent poverty in the context of a narrow tax base and revenues. Proposed cuts in employer contributions could potentially result in increased levels of inequality and threaten social protection systems' sustainability by constraining one of their most relevant and stable resource flows. The ILO (2018a) is critical of this one-size-fits-all approach and emphasizes the need to seek the most effective and efficient combination of benefits and schemes for each country. The next section will show some existing evidence of the effects of these policies on labour markets.

[13] The ILO's statement was actually in response to the initial publication of this World Bank report, which was delivered in 2018.

3. Empirical Evidence on Labour Market Impacts of Social Security Contributions

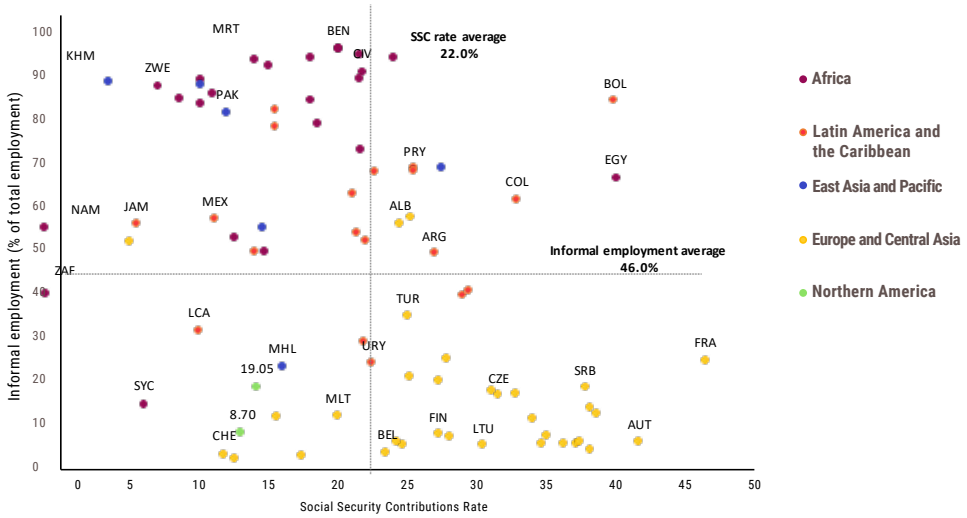
Empirical evidence on the impact of social contributions on employment and informality is mixed. Empirical studies seek to assess whether a reduction in social contributions coincided with additional job growth (or slower job destruction) or the formalization of informal workers that could not be attributed to any other factor. Assessments of the effects of labour tax changes face some difficulties (Bennmaker et al., 2009). First, there is generally limited variation in contributions paid across employers and workers. Second, when there is some degree of tax differentiation, it is often hard to find an accepted control group (comparable firms/workers that meet different taxes).

If social contributions create disincentives for work or formalization, lower contributions would lead to higher (formal) employment. However, available data do not show a clear pattern between social security contribution rates and the incidence of informality, although some interesting facts emerge from cross-country comparisons (Figure 7). On the one hand, African countries have the lowest contribution rates and the highest share of employment that is informal. On the other hand, European countries exhibit the highest contribution rates and the lowest informality rates. Countries in Latin America and the Caribbean, and in Asia and the Pacific, are heterogeneous, even when they come from the same region (Figure 7). For instance, Uruguay has contribution rates (22.5%) in line with the global average but is among the countries with the lowest share of informal workers in the world (24.5%). In the same region, Bolivia is one of the four countries with the highest social contribution rates (39.9%), and with informal employment accounting for a significant share of its total employment (84.9%). In Asia and the Pacific, the Marshall Islands and Pakistan have similar contribution rates (16% and 12%, respectively). Still, Pakistan's informality rate is 3.5 times that of the Marshall Islands' (82.2% vs. 23.7%).

A simple econometric exercise indicates no correlation between contributions rates and informality (see Box 1). This finding suggests that contribution rates are not the main determinant of informality rates. Thus, the reduction of informality requires a broad and coherent set of measures that support both the creation of new formal employment and the registration of informal employees and enterprises.

According to the ILO (2018b), informality is the result of the interaction of multiple factors, including the economic context, the legal, regulatory and policy frameworks, and of some micro-level determinants such as low level of education, discrimination, poverty, and lack of access to economic resources, property, and financial and other business services and markets.

Figure 7. Informal employment and social security contributions rates by region, latest available year



Note: With the aim of promoting international comparability, statistics presented on ILOSTAT are based on standard international definitions wherever feasible and may differ from official national figures. The figures on informal employment are derived using the same set of criteria across countries, which are based on employment status, institutional sector, destination of production, bookkeeping, registration, social security contribution, places of work and size.
Source: ILO (2023) and ILO World Social Protection Database.

Box 1. Regression analysis of social security contributions on informality[14]

We analyze the share of informal employment over total employment and social security contributions rates for 83 countries to assess the association between these two variables. Countries are grouped into four categories according to their GDP per capita.

We estimate the following linear regression:

$$Y_i = \beta_0 + \beta_1 SSC_i + \sum_{k=1}^{3} \beta_{2k} CLASS_{ik} + \sum_{k=1}^{3} \beta_{3k} SSC_i * CLASS_{ik} + \varepsilon_i,$$

Where i denotes countries, and k denotes the income groups: upper middle income, lower middle income and low income; the high-income group is the reference group. Y_i is the share of informal employment for country i, SSC_i is the social security contributions rate for country i, and $CLASS_{ik}$ corresponds to the country's i income group k. β_{2k} are coefficients that denote income level effects, and β_{3k} are coefficients that reflect the interaction effects of social security rates and the classification of countries according to their income level. The coefficient of interest capturing the main effect of contribution rates on informality rates is β_1. Although it is negative, it is not significant, nor are the interactions with the factor associated with the classification of countries according to the income level (β_{3k}).[15]

Based on the results obtained from the regression, it can be inferred that social security contributions do not represent a significant factor in determining levels of informality. However, income level is strongly associated with the informality level.

The share of informal employment in any economy responds to the dynamics of multiple factors that intervene in the labour market, social variables and public policies. The regression presented here does not intend to explain the levels of informal employment. Still, it serves as a statistical approximation to the association between social security contributions and the share of informal employment, and its use is limited to descriptive purposes. In other words, we present a correlation analysis and do not suggest a causal relationship between these variables.

Early empirical studies on the topic relied on temporal variations within countries or comparisons between countries and produced a wide range of estimates. Some authors (Gruber, 1997; Korkeamaki and Uusitalo, 2008; Deslauriers et al., 2018) have pointed out that such approaches are not entirely convincing because of omitted variable bias. That is, there may be simultaneous changes in other variables affecting labour market outcomes in a country or other country-specific factors that may have an impact on both taxation policies and employment and wages (such as wage-setting institutions or regulations or differences in the overall level of taxation and aggregate employment).

More recent empirical studies on the effects of payroll taxes and social contributions use changes in tax rates within a country, depending on the types of firms, workers or regions, using double or triple differences estimation methods. In that regard, longitudinal studies explore changes in regionally differentiated tax schemes. Such schemes make it possible to compare employment changes for firms or workers that are similar and located close to one another but differ in tax rates (i.e., Difference-in-Differences) (Bennmaker et al., 2009).

Following this strategy, Bohm and Lind (1993) evaluate employment changes in northern Sweden that follow a reduction in the payroll tax and a small rise in marginal employment subsidies and find no employment effects. Johansen and Klette (1998) analyze the impact of subsidy schemes on payroll and investment costs across regions in Norway. They find that changes in payroll taxes have a limited effect on employment because the impact is largely shifted to wages. More recently, Korkeamaki and Uusitalo (2008) analyze the wage and employment effects of a reduction in payroll taxes in 20 municipalities in northern Finland and find no significant impact on employment in the targeted region. Also, Bennmaker et al. (2009)

[14] This Box was prepared by Ana Paula Monsalvo. For more details, see Annex 2.

[15] Under an alternative specification, an attempt was made to incorporate the proportion of inspectors per employed person by country as an explanatory variable. Unfortunately, the data available in ILOSTAT for this variable is scarce and corresponds mostly to high-income countries.

study the impact of payroll taxes in northern Sweden. They find no employment effects among firms existing before and after the reform with a positive effect on the number of firms and tendency to job creation when the analysis is extended to include entry and exit of firms, which would indicate that a reduction in payroll taxes would promote formal employment. Cruces et al. (2010) examine the effect of a series of cuts in payroll taxes that vary across geographical areas in Argentina between 1995 and 2001. The results indicate that changes in payroll tax rates are only partially shifted onto wages, and they point to the absence of any significant effect on employment. Regarding a payroll tax reduction programme in Brazil, using data from 2009–2015, García et al. (2018) estimated that the impact of the programme had no effect on employment.

Rather than generalized social contributions cuts, governments have often introduced targeted payroll tax or contribution reductions to improve the employment prospects of specific, and often disadvantaged, groups in the labour market (for example, low-wage, youth, long-term unemployed, women, or disabled workers). Egebark and Kaunitz (2013) study the payroll tax cut for young workers in Sweden in 2007 and estimate a small impact on employment and wages. Huttunen et al. (2013) analyze the effects of a subsidy on employers' social contributions for low-wage older workers (over 54 years) in Finland and conclude that there was no effect on the employment rate or wages of the eligible groups. Still, the policy slightly increased working hours among those already at work. Also, Balkan at al. (2016) assessed contribution subsidies in Turkey over two groups: (i) men from 18 to 29 years old and (ii) women older than 18 who had been unemployed for the past six months. They find that, overall, the change in the probability of being employed did not increase significantly. However, the subsidy programme had a statistically significant positive impact on the employment probabilities of women. Kramarz and Philippon (2001) study an increase in minimum wage accompanied by tax subsidies that are inversely related to wages in France. They find that tax subsidies have no (statistically) significant impact on the creation of new jobs. Fernandez and Villar (2016) assess the effect of a payroll contribution reduction in Colombia for low-wage workers (earning 1 to 10 times the minimum wage). These authors find that the tax reform reduced the informality rate of the workers affected by the reform between 4.3 and 6.8 percentage points. Saez et al. (2019) study the impact of a large payroll tax cut for young workers (aged 19 to 25) in Sweden from 2007 to 2009. These authors get novel results: they estimate an increase in youth employment of 2 to 3 percentage points for young workers relative to slightly older workers who were not receiving the benefit.

Finally, a set of studies use differential treatment for firms with specific characteristics. For instance, Aşık et al. (2022) study the impact of subsidies on employers' social contribution costs over small firms (those with fewer than 10 employees) in Turkey. They find that subsidies significantly increase registered employment in small firms and that the effects are sustained over time. The evidence suggests that the positive effects on registered employment are mainly driven by the formalization of existing workers as opposed to new job creation. Similarly, Gruber (1997) studied the incidence of a reduction in payroll taxation in Chile in the 1980s by exploring data on taxes and wages paid at the firm level. He found no effect on employment. On the other hand, Goos et al. (2007) analyze the effects of payroll tax exemptions for manual workers in the 1990s in Belgium (the "Maribel subsidies"). They find that subsidies have increased full-time manual employment by 5 to 8 per cent and pre-tax wages by 1 to 3 per cent (without much evidence of displacement effects for other workers).

In a recent study, Biró et al (2022) analyzed the heterogeneous impacts of payroll tax cuts across firm types in Hungary. In 2013, social security contributions for all over-55 private-sector employees were reduced by 6.3 per cent of the average salary. The authors conclude that high-productivity firms offering good jobs respond to the tax cut by raising wages, while low-quality firms will respond mainly on the employment margin. As a result, this policy could change the composition of jobs in the economy and the authors warn that universal payroll tax cuts could have some unintended consequences by creating bad jobs with little value for many workers.

It should be noted that, even when targeted policies have effectively benefitted the workers they were directed at, there are possible "deadweight losses" (that is, missed economic opportunities for firms and workers) or substitution effects, when the benefit displaces other groups of workers who are replaced by those focused on by the programme. Not all the cited studies take these effects into account.

Table 1 summarizes empirical studies that analyze the impact of payroll taxes or social contribution cuts (or increases in subsidies) on employment and informality reduction. This review requires a few caveats. First, the empirical evidence available

comes mainly from developed countries with strong labour market institutions and a low share of informal employment, which points to the need for further studies in low- and middle-income countries, where informality is more prevalent. Second, we only consider studies that analyze taxes or contribution cuts (or subsidies), since the impact of increases in taxes and contributions might be asymmetric. That is, rises and reductions in taxes or contributions exert differently sized effects. For instance, if wages are rigid downward, they may react more flexibly to tax reductions than to increases, which in turn will have different impacts on employment.

The findings on social contributions' impact carry important implications for public policy. Overall, the studies reviewed here find that taxes or contribution reductions are mostly passed on to workers in the form of higher wages, and thus there are no significant employment or formalization gains from reducing contribution rates. Moreover, the fiscal cost of diminishing contribution rates might be sizable. For instance, Egebark and Kaunitz (2013) study the payroll tax cut for young workers in Sweden in 2007-2009 and estimate the cost per created job by comparing the cost of foregone payroll tax revenue due to the tax reduction with the increased tax revenue generated by the estimated employment and wage increases. The authors claim that the cost for each new job that is created was more than four times that of directly hiring workers at the average wage, which suggests that targeted payroll reductions are not a cost-effective way to boost employment.

Table 1. Summary of selected empirical studies that analyze the impact of payroll taxes or social contribution cuts (or increases in subsidies) on employment and informality reduction)

Country	Target group	Impact on employment	Impact on informal employment	References
Turkey (2016)	Small firms (fewer than 10 employees)	Increased	Not clear	Aşık, Bossavie, Kluve, Özen, Nebiler & Oviedo (2022)
Turkey (2008)	Two groups: (i) young men (18-29) and (ii) all women older than 18 unemployed for the last 6 months	Employment increased for older women	Not studied	Balkan, Baskaya & Tumen (2016)
Sweden (2002)	Universal, northern region	Not clear	Not studied	Bennmarker, Mellander & Öckert (2009)
Hungary (2013)	Workers over 55 years old in the private sector	Increased	Not studied	Biró, Branyiczki, Lindner, Márk & Prinz (2022)
Norrbotten, Sweden (1984)	Mining, manufacturing industry, tourism and some minor service sectors	No impact	Not studied	Bohm & Lind (1993)
Argentina (1995-2001)	Universal	No impact	Not studied	Cruces, Galiani & Kidyba (2010)
Sweden (2007-2009)	Young workers (19-25)	Increased	Not studied	Egebark & Kaunitz (2014)
Colombia (2012)	Low-wage workers (earning 1 to 10 times the minimum wage)	No impact	Decreased	Fernandez & Villar (2021)
Brazil (2012)	Companies in some specific sectors	No impact	Not studied	Garcia, Sachsida & Ywata de Carvalho (2018)
Belgium (1990s)	Manual workers	Increased	Not studied	Goos & Konings (2007)
Chile (1981)	Universal	No impact	Not studied	Gruber (1997)
Finland (2006)	Low-wage older workers (over 54)	No impact	Not studied	Huttunen, Pirttilä & Uusitalo (2013)
Norway (1883-1993)	Universal	No impact	Not studied	Johansen & Klette (1998)
Finland (2003)	Universal, northern region	No impact	Not studied	Korkeamaki & Uusitalo (2008)
France (1994-1998)	Universal, subsidy inversely related to wages	No impact	Not studied	Kramarz and Philippon (2000)
Sweden (2007-2009)	Young workers (19-25)	Increased	Not studied	Saez, Schoefer & Seim (2019)

**Increases or decreases shown are statistically significant. For more details, see Annex 3. Source: author's presentation.*

4. Recent Reforms in Social Security Contributions

In 2020, contribution rates for old-age, disability and survivors' insurance (the largest component of social security in terms of resources) accounted for 16.1 per cent of gross monthly wages on a global average. They are the highest in Europe and Central Asia (22.9%) and the lowest in Asia and the Pacific and Africa (12.2%).

Old-age pension contribution rates have remained relatively stable in recent years. Between 2015 and 2020, they fell by 0.1 per cent worldwide, mainly driven by reductions in employers' contributions. However, this global average includes large differences between regions. This component of social contribution rates increased in Africa, Latin America and the Caribbean, and North America. It fell in Europe and Asia (Figure 8). Recent changes can be explained by policies carried out by many governments in response to the COVID-19 crisis, as will be described later.

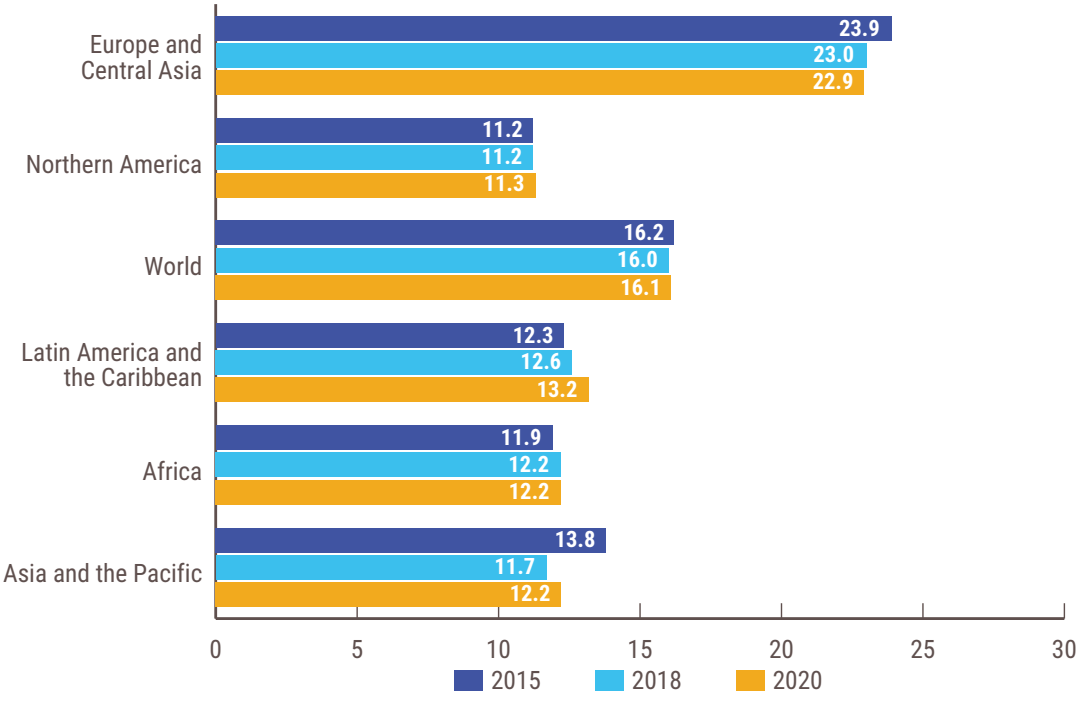
Beyond the relative stability of contribution rates in each region, in recent years several countries have implemented important reform processes with significant changes in contribution rates.

The reasons behind the changes in social contributions since the end of the last century are varied. Five types of motives will be discussed here. First, reductions in social contributions that have been part of structural reforms of pension systems. Many countries transitioned from defined-benefit, pay-as-you-go, and publicly administered systems to a defined-contribution, individually funded, and privately administered scheme (fully or partially) (Mesa-Lago, 2022). In these cases, competition among private-sector insurers was hoped to increase efficiency and reduce administrative costs. Second, cuts in social security contributions have been part of particular stabilization programmes to reduce the inflation rate or achieve the balance of payments sustainability (Argentina is a good example of this). Third, in some cases, reductions or subsidies to social security contributions have been implemented to encourage labour demand for specific population groups, regions or sectors. Examples of this type of policy, generally temporary, can be found in developed countries and in some developing countries. Finally, the response of several countries to the COVID-19 crisis allows for illustrating cases where the reduction of contributions may be motivated by extraordinary situations.

4.1. Contribution cuts during structural reforms of pension systems

Many countries have made substantial reforms in their pension systems, including modifications in the levels of financing through contributions. For example, since 2000 most countries in the European Union have introduced substantial

Figure 8. Contribution rates by region: Old-age, disability and survivors (in percentage)



Source: ILO World Social Protection Database.

reforms (mostly parametric) to enhance their fiscal sustainability in a context of ongoing and intensifying population ageing while seeking to maintain adequate pension income. More than half of these countries have introduced automatic mechanisms that link pension system parameters (such as age of retirement, benefits and financing resources) to life expectancy (Carone et al., 2016). These reforms have aimed at containing the future rise of the contribution rate, improving the system's dependency ratio, lowering the benefit ratio, and giving greater tax revenues and other financial resources to the system. Governments have moved towards a multi-pillar pension system: private pre-funded occupational pensions and individual provision for old age are given larger roles within the public-private mix of retirement income (Hinrichs, 2021).

In other regions, reforms have been quite different. For instance, in 1981, under a military government, Chile faced a structural reform that strongly influenced subsequent reforms in other countries and became an inevitable reference point. As Barr and Diamond (2016) pointed out, the introduction of the individual capitalization scheme (which included a reduction in social contributions) was widely disseminated by some analysts and by the World Bank (e.g. World Bank, 1994). Since then, many countries have started to go partially down this road in Latin America and Central and Eastern Europe.

According to Ortiz et al. (2018), from 1981 to 2014, 30 countries fully or partially privatized their social security public mandatory pensions. Fourteen were in Latin America: Chile (first to privatize in 1981), Peru (1993), Argentina and Colombia (1994), Uruguay (1996), Bolivia, Mexico and Venezuela (1997), El Salvador (1998), Nicaragua (2000), Costa Rica and Ecuador (2001), Dominican Republic (2003) and Panama (2008). Another 14 countries in Eastern Europe and the former Soviet Union embarked on the experiment to privatize pensions: Hungary and Kazakhstan (1998), Croatia and Poland (1999), Latvia (2001), Bulgaria, Estonia and the Russian Federation (2002), Lithuania and Romania (2004), Slovakia (2005), Macedonia (2006), Czech Republic (2013) and Armenia (2014). Additionally, two countries privatized their public pension system in Africa – Nigeria (2004) and Ghana (2010).

In Eastern Europe, most of the countries have pursued multi-pillar reforms with the promise of higher economic growth, higher benefits to future pensioners, and hedging of political risk inherent in public schemes. These reforms were made following recommendations of international financial institutions, mainly the World Bank (1994). As will be seen, this type of reform created high transition costs (Altiparmakov & Nedeljkovic, 2022). Since the end of the last century, 11 transitioning economies in Eastern Europe opted to create a second pension pillar by partially diverting existing PAYG contributions to the newly established private pension funds.

Since the mid-1990s, in many South-Eastern European countries, the reforms in pension systems involved changes in the organization of pension systems, relying on capitalization, the building up of returns on individual investments, and the rewarding of higher earnings and more extended periods of contribution with higher benefits. The pension systems of all these countries shared certain aspects. These proceeded from a Bismarckian tradition that had influenced their pre-Second-World-War existence. The breakup of Yugoslavia and the decided shift by all the countries in the region towards a more market-oriented economy had an impact on their pension systems.

Then, countries following these reforms diverted a proportion of contributions to mandatory personal accounts. But, as Casey (2022) pointed out, the underdevelopment of capital markets and large fiscal costs created by the reform (transition costs) led to pension funds investing mainly in government bonds. For example, in Croatia and Romania, public bonds accounted for 60 per cent of the asset allocation of these pension schemes in 2018 (Casey, 2022, Table 4).

Casey (2022) studies the reforms in South-Eastern Europe[16] and describes five significant differences with countries in Western Europe. First, South-Eastern countries' populations were old and ageing (except for Kosovo). Second, all the countries had relatively low levels of labour force participation. Third, most of these countries suffered from low rates of effective tax collection. Fourth, many faced substantial fiscal problems.

[16] With the exceptions of Bulgaria, Romania and Albania, all the countries covered by Casey were once part of the former Yugoslavia. Moreover, all had been "socialist," even if Yugoslavia was not part of the "Soviet sphere". Romania was in many respects outside that sphere, and Albania was peculiarly independent. However, all the countries had characteristics that are pertinent to understanding how their current pension systems came into being and the challenges these pension systems continue to face.

And last, all suffered from underdeveloped capital markets.[17]

This wave of reforms also reached former USSR countries in Central Asia. In 1997, the Kazakh government designed a compulsory fully funded defined contribution scheme that replaced the former Soviet Union's PAYG system. The reform aimed to address the deteriorating government budget and to make the pension system independent and self-financed. High unemployment, a large informal sector, weak economic performance and public discontent with delays in receiving pensions and wages payment put pressure on the government to implement reforms to the system. The reform was also based on the multi-pillar model proposed by the World Bank (1994), with the establishment of private pension funds that resembled the Chilean pension model (Maltseva, 2018). The World Bank collaborated with the Kazakhstan pension reform, providing technical assistance and financing (Zhandildin, 2015).

The new scheme included three components: (i) a public solidarity pension scheme that provided benefits to current pensioners, (ii) a mandatory private pension scheme with defined contributions based on individual accounts managed by private pension funds, and (iii) voluntary pension contributions. The Kazakhstan government went even further than the Chilean system toward a fully privatized system and eliminating solidary old-age pension security by automatically transferring workers of all ages to the new private fully funded pension system.

Mandatory contributions were accumulated in individual pension accounts. The employee's contribution rate was 10 per cent of the worker's taxable income (to a maximum of 75 times the minimum wage). There were no employers' contributions. Also, workers and employers could make voluntary contributions in addition to the mandatory ones.

There are various studies on the impact of these reforms in different countries. For Latin America, Barr and Diamond (2016) argue that incomplete coverage remains a persistent problem after these reforms, given the scale of informal activity, the fiscal costs of transition, and administrative costs (Barr and Diamond, 2016). Also, Mesa-Lago (2022) asserted that, contrary to the promise of expanding coverage, the proportion of contributors in the economically active population fell after the structural reforms. In 2019, it was less than 50 per cent of the economically active population in at least five of the eight countries with individual savings accounts for which there was information available. Coverage with benefits has expanded for people aged 65 and older due to the implementation of non-contributory pensions financed by the State, and not by the private system.

The failure of these reforms led to reform reversals years later. As of 2018, 18 countries had re-reformed, reversing pension privatizations (60% of total): Venezuela (2000), Ecuador (2002), Nicaragua (2005), Bulgaria (2007), Argentina (2008), Slovakia (2008), Estonia, Latvia and Lithuania (2009), Bolivia (2009), Hungary (2010), Croatia and Macedonia (2011), Poland (2011), the Russian Federation (2012), Kazakhstan (2013), the Czech Republic (2016) and Romania (2017) (Ortiz et al., 2018).

To analyze the effects of pension privatization in Eastern European countries with a broader perspective, Altiparmakov and Nedeljkovic (2022) investigate pension privatization effects on economic growth using a panel of 36 emerging economies – 17 from Latin America and 19 from Eastern Europe and the Euro-Asia region. The dataset includes 21 countries that implemented pension privatization, and 15 that did not privatize were the peer control group. Pension privatizers include Hungary, Poland, Latvia, Estonia, Croatia, Bulgaria, Lithuania, Slovakia, North Macedonia and Romania from Eastern Europe; Argentina, Bolivia, Columbia, Chile, Costa Rica, Dominican Republic, El Salvador, Mexico, Peru and Uruguay from Latin America; and Kazakhstan from Euro-Asia. The control group of 15 non-privatizing countries consists of Albania, Armenia, Brazil, Czech Republic, Ecuador, Georgia, Guatemala, Honduras, Moldova, Nicaragua, Panama, Paraguay, Slovenia, Turkey and Ukraine.

Their results indicate that pension privatization failed to produce any statistically significant increase in the economic growth rate compared to non-privatizing peers. Empirical evidence seems to indicate weaker growth performance in Eastern Europe compared to Latin America and weaker performance in countries where private pension funds have been predominantly investing in domestic government bonds. However, these two results are not statistically significant. The authors point out that pension privatization failed to achieve genuine capital accumulation in those

[17] Huber and Stephens (2000) point to the weakness of the trade union and left parties which, if stronger, could contain the pressure for structural reforms.

countries but was reduced to PAYG financing in disguise – an arrangement that provides no mechanisms for accelerating economic growth.

As seen, the failure of these reforms to achieve the initially proposed objectives led to a series of reform reversals, ranging from the outright dismantling of the mandatory private second pillar, its scaling down, and allowing workers to return to the public system to claim full PAYG benefits. Furthermore, the extension of coverage that occurred in many countries was due to non-contributory pensions that were introduced to fill the gaps left by privatized schemes (Mesa-Lago, 2022).

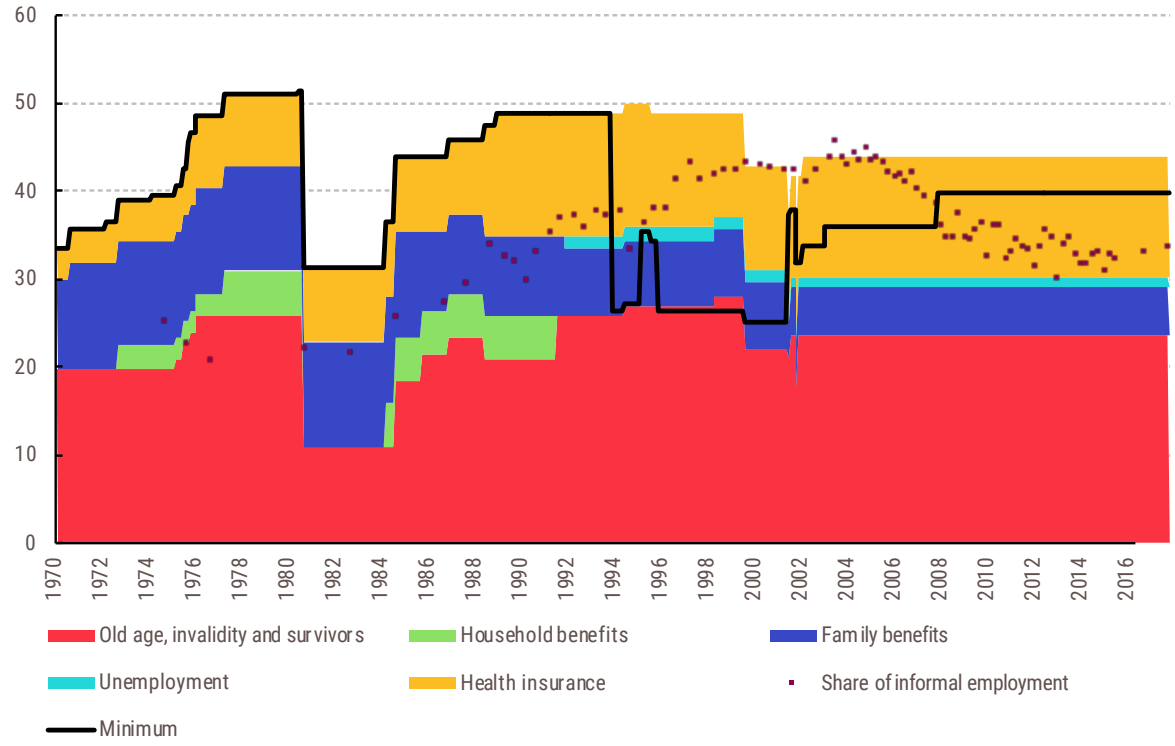
4.2. Contribution cuts in stabilization programmes

Argentina is the clearest (and maybe the only) example of this type of reform. It implemented reductions in social contributions on several occasions with different motivations. Hence, this case is of particular interest. Throughout the last century, Argentina rapidly expanded the different components of contributory social security, including pensions, health insurance for active and retired workers and their dependants, family allowances, unemployment insurance, employment, and housing programmes. After an important expansion of its components in the early 1970s, in 1994, contribution rates reached their highest level: employee and employer contributions rose to 50 per cent of workers' gross salary. Figure 9 shows the evolution of the rates since 1970 and the available information on labour market informality.

From the end of the 1970s until the 2000s, Argentina implemented several reform policies comprising reductions in wages and social contributions to promote the competitiveness of tradable sectors of the economy in the face of the lag of the real exchange rate. This policy is known as fiscal devaluation.

The first of these reforms was executed in the early 1980s by the military government. In the context of high inflation, the government implemented an anti-inflationary programme based on anchoring the exchange rate with a crawling peg scheme. The scheme consisted of the advanced announcement of the projected values of the exchange rate. The evolution of the rate of devaluation was expected to decrease over time, following the evolution of supposedly

Figure 9. Evolution of social security contribution rates for different branches of social security in Argentina. 1970-2017 (in percentage of gross salaries)



Source: Author's presentation based on data from the Ministry of Finance, Cetrángolo (1991) and national legislation.

declining domestic prices. As that did not happen, an inflationary process was unleashed and the country suffered a loss of competitiveness in the tradable sectors of the economy, which the government tried to compensate for by reducing labour costs. It was then decided to impose a strong reduction in the contributions for social security purposes, with a fiscal cost equivalent to 1.8 per cent of GDP. The programme's failure led to an economic and political crisis, and the measure was reversed only in 1984, after the return to a democratic government.

Later, in the 1990s, there was a second attempt to use social contribution reductions to stabilize the economy. The hyperinflationary process was confronted by establishing a 1-to-1 convertibility between the domestic and US currencies (an arrangement technically known as "currency board"). As had previously happened, there was also significant inflation in the non-tradable sectors, which the government tried to cushion by reducing labour costs induced by promoting reductions in contributions on wages. Additionally, in this case, reductions in contribution rates were different depending on the activity sector and region, as will be discussed in the following section.[18] Also, the new fully funded pension scheme was implemented.

These reforms led to a high fiscal imbalance after several years of implementation. When the currency board collapsed in 2001, the country fell into a deep economic, political and social crisis, accompanied by high unemployment and poverty rates.

Finally, the last attempt to reduce contributions was at the end of 2017, under different objectives and circumstances. Without being part of an anti-inflationary programme with an exchange rate anchor, this reform was ideologically based, with the explicit intention of promoting formal employment. A growing non-taxable minimum scheme was established in the definition of the tax base for contributions between 2018 and 2023. The reform was interrupted after the change of government in 2019.

4.3. Contribution cuts for specific groups

The Argentine case is also illustrative of contributory reduction policies with different motivations successively and, in some cases, simultaneously. As mentioned, in the 1990s, Argentina introduced contribution rate cuts depending on the activity sector and region to improve the situation of certain workers and jurisdictions.

In 1993, the government of Argentina reduced payroll taxes to reduce unemployment and promote the formalization of the labour market. The scheme considered 85 geographical areas defined according to poverty levels and the distance to the country's capital (Buenos Aires). Tax cuts were different across regions and sought to compensate for differences in their development levels and location costs. They ranged from 6.6 per cent to 23.1 per cent. Figure 9 shows this regime by observing the gap between the theoretical rates shown by area and the line that shows the minimum rates.

As was mentioned, Cruces et al. (2010) point to the absence of any significant effect on employment[19]. However, the authors state that the tax cuts significantly affected government finance: payroll tax collection as a percentage of total wage income (considering the whole country but excluding public sector and agricultural workers) fell by almost half from the mid-1990s to the early 2000s.

The Argentine case is not the only example of this type of reform. There are some cases in Europe that, with different motivations, also promoted reductions in contributions destined for specific groups or regions for a certain period. For instance, in 2003, Finland temporarily abolished employers' contributions to pensions and health insurance in 20 municipalities with high unemployment rates in the north of the country. According to Korkeamaki and Uusitalo (2008), the policy was designed as an experiment to evaluate the effect of a cut in payroll taxes on employment in the target region. Removing these contributions reduced the payroll taxes by 4.1 percentage points

[18] For this reason, the black line in Figure 9 indicates the level of contribution for those sectors and regions with the highest reduction.

[19] Cruces et al. (2010) investigated the effect of those changes in payroll taxes on wages and employment in Argentina. The analysis was based on administrative data and focused on the impact of a series of major changes in payroll taxes, which varied across geographical areas. As the authors explain, this setup offers two main advantages over previous studies. First, using longitudinal data, the variation in tax rates across space and time provides a plausible source of identification of their effects on employment and wages. Second, the use of legal tax rates for each area at each point in time provides a remedy for the measurement error bias raised by the use of empirical rates constructed from observed tax and wage bills. Once this bias is accounted for, the results indicate that changes in payroll tax rates are only partially shifted onto wages.

on average. The exemption was designed to last three years (until 2005) and the government extended it for four additional years (until 2009). The authors found no effect on employment. Interestingly, the government increased the contribution rate to the health system by 0.014 percentage points for employers outside the target region to avoid defunding the system.

Turkey introduced a direct subsidy for social contributions for employers of women and youth (aged 18-29) from 2008 to 2010. The programme was designed to create new jobs for women and youth without provoking the replacement of existing workers with new ones. Balkan et al. (2016) observe that the programme has been effective in creating formal employment for some sub-groups, mainly low-educated or low-skilled older women.

Additionally, Italy reduced social security contributions for young people in the southern region for the year 2022, to promote youth employment and reduce youth emigration from the southern areas. According to Ministero dell'Economia e delle Finanze (2022), the interventions dedicated to employment amount to about 6 billion euros allocated mainly to directly supporting the maintenance and expansion of employment in the south through a 30 per cent reduction in employer's contributions (about 4 billion euros). The document states that enterprises in the regions of Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicily and Sardinia will benefit from this reduction if the worker retains employment for at least nine months. An evaluation of the results of these experiences was not available at the time this paper was prepared.

Finally, the special treatment that, in some countries, is given to self-employed workers and other small taxpayers deserves attention. In some cases, the simplified tax regimes include a fixed amount of contributions and are applicable to workers up to a certain level of income to favour their formalization and broaden the coverage of social protection (pensions and, in some cases, health insurance). In Latin America, this is the case of the so-called mono-tax introduced in Argentina, Brazil and Uruguay. Whenever the introduction of these regimes responds to the need to favour the transition towards formalization, it must be accompanied by an institutional design, tax incentives and complementary policies to favour this transition. However, if the schemes are proposed as initiatives to extend social protection to informal workers without contemplating incentives for formalization within a specific period, their fiscal cost should be adequately considered. Of course, the difficulties of the economic environment – especially in the labour market – and the absence of adequate incentives limit formalization. Without a doubt, reformulations in the existing mono-taxes could allow for a better result (Cetrangolo et al, 2018).

Similarly, in 2020, Greece introduced a new scheme of social contributions for the self-employed. Freelancers, farmers and other self-employed people must choose from six social insurance categories, each corresponding to pre-defined amounts for the contributory pension and health care. Under this scheme, contributions are no longer linked to workers' declared income. Self-employed individuals with less than five years of insurance can choose a particular category with lower contributions. Also, social contribution rates for the employed were reduced by 0.9 percentage points, due to the cut in contributions for unemployment benefits. Jordan has introduced a similar scheme.

Also, one year before, in 2019, Egypt passed a new Social Insurance and Pension Law (no. 148 of 2019). The norm addresses social insurance and pension matters, bringing into a single legal framework four categories of workers (employees with third parties, employers and similar, Egyptians working abroad, and less stable and seasonal workers such as fishermen, land-transportation employees and household workers), previously covered by four different laws. With the purpose of fostering registration, under Law 148 contribution rates were reduced from 26 per cent to 21 per cent (12 per cent on the employer and 9 per cent on the employee, except for the less stable workers where the State covers employers' contributions), and they are expected to gradually return to 26 per cent by 2055.

4.4. Contribution cuts in large scale tax reforms

In general, reforms incorporating contribution cuts require other changes in fiscal policy to replace the loss of fiscal resources. Here the focus is on some changes in contributions that are part of more comprehensive tax reforms. While a comprehensive study of tax reforms goes far beyond the objectives of this report, a few examples are given for illustrative purposes only.

In recent years, some countries have implemented tax reforms that combine a reduction in social contributions with increases in other taxes, such as income tax or value-added tax. The goal is to boost formal employment, investment and

consumption. This approach recognizes that, even if contribution cuts would create formal employment, the loss in fiscal revenue would be significant and, therefore, an increase in other sources of revenue is unavoidable.

In this regard, Uzbekistan inherited a comprehensive social protection system from the Soviet period based on full employment, universal child care and old-age income financed mainly through social insurance. More recently, the country transitioned from a system with universal programmes to a hybrid system that combines contributory and non-contributory financing (Papa et al., 2020). Until 2019, social insurance was financed by social contributions and general taxation. Employers' social security contributions included a unified social payment that was different for small and large enterprises (15% for micro and small enterprises including agricultural workers, 25% for others), and mandatory contributions to the State Trust Fund (3.2%). Workers contributed 8 per cent of their gross salary to the Off-Budgetary Pension Fund, and 2 per cent was taken from personal income tax for the individual pension savings account, which had progressive rates (from null to 23%).

In 2019, Uzbekistan implemented a large-scale tax reform to reduce the tax burden on private firms and promote formal employment. According to the new tax code, employers' unified social payment (now called Social Tax) was reduced to 12 per cent for all private firms. State employers continue to contribute 25 per cent of gross salary. Mandatory contributions to the State Trust Fund were suspended, and workers' social insurance contributions were replaced by personal income tax at a flat rate of 12 per cent. Employees contribute 0.1 per cent from the general personal income tax toward individual pension accounts (Papa et al., 2020).

In Georgia, the new tax code in 2005 reduced the number of taxes from 22 to eight and then to six in 2008. From 2005, workers' social security contributions were abolished, and employer contributions were reduced from 28 per cent to 20 per cent. A flat 12 per cent tax rate replaced a progressive income tax, and the value-added tax was reduced. Since 2019, individual pension accounts have been mandatory for all employees who were 40 years old or younger at the start of the reform. According to ITUC (2022), there is little evidence that the reforms have brought any improvements to labour market outcomes or the growth rate, which constituted the main rationale for their introduction.

In 2019, Lithuania introduced significant changes in its pension system financing by increasing personal income taxes and shifting social contributions from employers to employees. The goal was to ease the overall tax burden on labour and simplify the social contribution system. Employers' social security contributions were removed, and employees' contributions were raised to 8.72 per cent. Also, gross wages were raised by 28.9 per cent to compensate for the effect of increased rates (OECD, 2022). Finally, the remainder was to be financed by changes in personal income taxes. No effect of the reforms in Uzbekistan and Lithuania has yet been documented.

4.5. Contribution cuts during extraordinary situations

During the COVID-19 crisis, governments implemented measures to protect employment and guarantee household income. The three most common measures regarding social security contributions include its reduction, deferral in the payment, and exemption from contribution obligations.

Many countries reduced or subsidized contributions. For example, France subsidized employers' contributions in designated sectors without lowering individual accruals, and Greece fully subsidized pension contributions for workers who stopped their activities due to the pandemic. Hungary suspended pension contributions in sectors affected by the lockdown while entitlements kept accruing fully. Norway temporarily reduced social security contributions by 4 percentage points. In Korea, all workers whose income was reduced due to the pandemic were exempted from contributions on their remaining earnings; but there were no pension rights accruing for these workers. Finland lowered the mandatory pension contributions from May to December 2020 by 2.6 percentage points, without reducing future pension benefits. In this case, the buffer fund will cover the reduction, which should be replenished by 2025 through higher contributions after 2021 (OECD, 2021). Costa Rica reduced the interest rates on delayed social contributions for the health and pension systems. In India, for three months, the government contributed 24 per cent of salaries (12% of employer share and 12% of employee share) to some companies. Italy reduced social contributions payments by 30 per cent for firms in the less-developed southern region.

Some countries allowed for the deferral of contributions for a few months and temporarily lowered or removed the penalties for delays in

paying contributions; these included Belgium, Belize, Brazil, Cameroon, China, Costa Rica, the Czech Republic, Estonia, Finland, France, Greece, Guatemala, Italy, Japan, Mexico, Monaco, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Spain, Switzerland, Turkey, Uganda and the United States (ILO, n.d.).

Also, a few countries, such as Australia and Chile, provided financial relief to workers by allowing exceptional withdrawals from the mandatory funded pension schemes. In Australia, withdrawals accounted for 1.4 per cent of the 2019 value of assets. In Chile, around 35 per cent of participants withdrew all their pension savings, representing nearly 25 per cent of assets (Fuentes, 2021; OECD, 2021). Many schemes have lost contributors, and probably additional effects will appear over time because systems may have lost capitalization, and capital stocks have been used to finance social protection and economic responses to COVID-19.

At the time of writing, it was not possible to see the effects of this crisis on social security systems and public accounts. Future reforms and adjustments will likely have a significant fiscal impact, as Treasuries will have to compensate pension schemes. Likewise, regarding health insurance, the effects of COVID-19 are already appearing, with contribution rates increasing in some European countries.

5. Final Remarks

The large share of the informal economy and, more precisely, of informal employment is a structural characteristic of the economies of most countries. This fact challenges the possibility of organizing social protection schemes supported exclusively by contributory financing. The prevailing view is that a mix of funding sources through contributions and taxes is needed.

The composition of that mix is highly debatable and depends on many different factors for each country and region. Recently, some organizations and academics have suggested reducing or even abolishing social contributions and replacing them with general taxation. The main argument behind this proposal is to create incentives for the formalization of the economy. The objective of this paper has been to evaluate the validity of these arguments by bringing together some of the evidence and looking at the different contexts in which social contributions have been reduced.

The paper showed that social contributions are one of the main sources of financing for public policy. In 2019, social contributions accounted for 18.8 per cent of total taxation globally, or 5.7 per cent of GDP. High-income countries collect 8.6 per cent of GDP in social security contributions, seven times as much as low-income countries (1.3%). Social contributions account for one-quarter of total taxation revenues in high-income countries. On the other hand, in upper-middle, lower-middle and low-income countries, social contributions constitute 15.6 per cent, 10.6 per cent and 8.1 per cent of total tax revenues, respectively. Moreover, the paper showed that social contributions have remained a stable source of financing in the 21st century.

Although, from the perspective of public finance theory there are important reasons against using payroll taxes to finance general government spending, most do not hold when we consider the specific role in financing social insurance. There are several reasons why payroll or employee compensation should be the tax base for financing most social security programmes. The reasons are wide ranging, from the relative administrative and operational ease of collecting payroll-type taxes; the possibility of linking benefits to the worker's earnings and tax payments, with desirable incentive effects on formalization; to a preference to confine the costs of the programme; the relative security and stability of a programme that has its own earmarked funds; and finally, the political support for programmes where the public can see what it is receiving for what it is paying.

Despite these arguments, some countries implemented reforms that reduced the contribution financing of pension systems for various reasons during the last decades. In some cases, contribution reductions were implemented as part of the structural reforms of the pension systems; in other cases, as a complement to particular stabilization programmes; sometimes to stimulate the demand for labour from specific population groups, and sometimes motivated by extraordinary situations.

Importantly, the paper has shown that the available data does not present a clear pattern between social security contribution rates and the incidence of informality. Most empirical studies find that contribution cuts fall mostly on workers' wages. Thus, there are no significant employment or formalization gains in reducing contribution rates.

At the same time, any reduction in social contributions creates an effective loss in government revenue in the short term, limiting the fiscal space for implementing public policies that aim to reduce poverty and inequality. The

potential improvement in the fiscal budget through the higher formalization of the economy would only appear in the long term, if ever. Moreover, since informality makes it difficult to collect taxes, replacing contributions with other taxes (such as income tax or value-added tax) could be regressive and lead to greater imbalances on the macroeconomic front, as illustrated by many of the cases reviewed in the paper.

The resources from public budgets are of central importance to complement contributory financing, which is insufficient to ensure universal social protection floors and improve income distribution, especially in developing countries. In addition to the previous arguments, an eventual reduction in contributions is problematic in that it would exert additional pressure on public budgets in economies that face considerable difficulties collecting taxes with redistributive potential, namely personal income tax. In short, the proposals to reduce contributions – beyond generating uncertain effects on the labour market – could cause macroeconomic difficulties and would probably only result in increased business profitability in countries where income tax collection is, in general, elusive.

This paper focused on analyzing the impact of contributory financing of social protection and argued in favour of its maintenance. Beyond this, it should be noted that the success of policies to promote decent work and universal social protection depends on the integration of a wide variety of policies that have not been dealt with here. Among them is the need to promote job-intensive growth, while maintaining a balanced and pro-employment macroeconomic framework and strengthening labour and social protection institutions.

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Annex

Table 2. Annex 1. Social security contributions' revenue by country and region, selected years (percentage of total taxation and GDP)

Country/Region	As % of total taxation				As % of GDP			
	2000	2006	2012	2019	2000	2006	2012	2019
Burkina Faso	15.9	13.3	9.6	10.9	1.6	1.6	1.4	1.9
Cabo Verde	5.2	2.2	0.2	0.2	0.8	0.5	0.0	0.0
Cameroon	8.1	6.7	7.4	7.3	0.9	0.8	1.0	1.0
Côte d'Ivoire	8.8	8.1	9.7	11.3	1.0	0.9	1.2	1.5
Eswatini	11.6	13.3	12.1	13.0	1.2	1.6	1.5	2.4
Mali	7.7	10.0	10.3	10.0	0.9	1.4	1.4	1.7
Mauritius	4.5	3.8	3.6	4.1	0.8	0.7	0.7	0.9
Morocco	11.0	17.9	18.3	21.9	2.4	4.7	5.4	6.2
Niger	5.4	4.0	4.8	5.4	0.4	0.3	0.5	0.6
Rwanda	5.0	5.5	6.6	5.9	0.5	0.6	0.9	1.0
Senegal	4.0	4.2	6.6	7.0	0.5	0.7	1.1	1.2
South Africa	0.0	1.6	1.6	1.3	0.0	0.4	0.4	0.4
Tunisia	21.6	24.6	28.5	28.3	5.3	6.0	8.3	9.7
Africa	**8.4**	**8.9**	**9.2**	**9.7**	**1.3**	**1.6**	**1.8**	**2.2**
Australia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bangladesh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bhutan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Japan	35.2	36.6	41.6	41.1	8.9	9.7	11.6	12.9
Korea	16.7	21.2	24.7	26.7	3.5	4.8	5.9	7.3
Malaysia	2.0	1.8	1.5	2.5	0.3	0.3	0.2	0.3
New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Papua New Guinea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philippines	13.1	11.4	12.9	14.3	2.0	1.8	1.9	2.6
Singapore	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thailand	3.7	5.0	4.7	5.9	0.5	0.9	0.9	1.0
Vanuatu	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asia and the Pacific	**5.9**	**6.3**	**7.1**	**7.5**	**1.3**	**1.5**	**1.7**	**2.0**
Austria	33.8	34.0	33.7	34.9	14.3	13.8	14.1	14.9
Belgium	30.8	30.7	32.2	31.0	13.5	13.3	14.3	13.2
Bulgaria	31.0	26.3	26.0	29.1	10.6	8.0	6.8	8.9
Czech Republic	44.3	43.6	43.7	44.2	14.3	14.8	14.6	15.4
Denmark	1.4	0.2	0.2	0.1	0.6	0.1	0.1	0.0
Estonia	35.1	32.8	35.2	35.0	10.9	10.0	11.2	11.7
Finland	25.2	27.9	29.6	27.9	11.5	11.7	12.6	11.8
France	35.8	36.9	37.1	33.0	15.6	16.0	16.4	14.8
Germany	39.0	38.0	37.9	37.9	14.2	13.3	14.0	14.6
Greece	30.3	33.0	30.6	30.8	10.1	10.3	11.1	12.2
Hungary	29.4	33.2	33.9	32.0	11.3	12.1	13.2	11.7
Iceland	7.7	7.9	10.4	9.2	2.8	3.1	3.5	3.2
Ireland	11.9	12.3	16.9	16.8	3.7	3.9	4.7	3.7
Israel	14.6	15.4	16.9	17.4	5.1	5.3	5.0	5.2

Country/Region	As % of total taxation				As % of GDP			
	2000	2006	2012	2019	2000	2006	2012	2019
Italy	28.5	29.5	29.8	31.2	11.6	11.9	13.0	13.3
Kazakhstan	0.0	1.0	2.5	3.2	0.0	0.2	0.6	0.5
Kyrgyzstan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Latvia	33.5	28.0	29.8	30.6	9.8	8.0	8.6	9.6
Liechtenstein	22.9	26.7	27.6	30.3	4.7	5.1	6.1	6.3
Lithuania	32.2	30.1	40.0	31.8	9.9	9.1	10.8	9.6
Luxembourg	26.1	27.9	29.1	27.7	9.6	10.0	11.2	10.8
Netherlands	38.7	36.0	40.8	34.2	14.3	13.0	14.5	13.4
Norway	21.0	19.9	22.6	26.5	8.8	8.5	9.3	10.6
Poland	39.2	35.7	37.3	37.6	12.9	12.0	12.0	13.2
Portugal	25.6	25.8	27.4	27.8	7.9	8.1	8.7	9.6
Slovak Republic	41.4	39.4	42.4	43.4	13.9	11.5	12.2	15.0
Slovenia	39.7	38.1	42.1	42.2	15.0	14.8	15.9	15.7
Spain	34.9	32.7	36.1	35.3	11.5	11.8	11.7	12.3
Sweden	25.5	25.5	23.8	21.4	12.7	11.7	10.0	9.2
Switzerland	24.2	23.4	24.9	23.7	6.5	6.0	6.4	6.5
Turkey	18.7	22.4	27.2	31.4	4.4	5.2	6.7	7.2
United Kingdom	16.8	18.5	19.0	19.7	5.5	6.1	6.1	6.5
Europe and Central Asia	**26.2**	**26.0**	**27.7**	**27.4**	**9.3**	**9.0**	**9.5**	**9.7**
Argentina	15.8	13.8	22.2	19.9	3.0	3.5	6.8	5.6
Bahamas	11.9	12.0	13.7	11.6	1.5	1.5	2.0	2.2
Barbados	15.6	17.5	20.3	19.5	4.8	5.2	6.2	6.6
Belize	5.8	9.2	8.3	8.7	1.1	2.1	2.1	2.5
Bolivia	7.3	5.7	19.1	25.1	1.3	1.1	4.9	6.2
Brazil	23.7	23.7	25.9	25.9	7.0	7.9	8.4	8.4
Chile	7.3	5.8	6.5	7.3	1.4	1.3	1.4	1.5
Colombia	16.3	11.6	9.0	9.5	2.6	2.2	1.8	1.9
Costa Rica	30.4	29.0	33.3	34.2	6.4	6.4	7.5	8.1
Dominican Republic	1.0	0.7	0.4	0.4	0.1	0.1	0.1	0.1
El Salvador	19.5	12.5	12.9	12.8	2.8	2.3	2.5	2.7
Guatemala	15.5	14.6	15.2	16.8	1.8	2.0	2.0	2.2
Guyana	11.4	11.3	9.0	9.5	1.8	1.6	1.4	2.2
Honduras	9.4	13.2	16.4	16.0	1.6	2.4	3.0	3.4
Mexico	18.0	17.5	16.5	13.8	2.1	2.0	2.1	2.3
Nicaragua	18.0	18.9	21.3	25.7	2.6	3.5	4.4	6.6
Panama	38.2	33.7	32.5	41.5	5.9	4.9	5.4	5.8
Paraguay	25.6	22.5	26.2	26.4	3.0	2.5	3.5	3.7
Peru	11.9	9.4	10.5	12.1	1.8	1.7	2.0	2.0
Saint Lucia	10.0	10.2	11.9	10.7	2.0	2.0	2.3	2.2
Trinidad and Tobago	6.4	3.8	6.1	12.3	1.4	1.2	1.7	3.0
Uruguay	27.5	20.3	25.8	26.4	5.9	4.9	6.4	7.0
Latin America and the Caribbean	**15.8**	**14.4**	**16.5**	**17.5**	**2.8**	**2.8**	**3.5**	**3.9**

Country/Region	As % of total taxation				As % of GDP			
	2000	2006	2012	2019	2000	2006	2012	2019
Canada	13.6	14.6	15.1	13.9	4.7	4.8	4.7	4.7
United States	23.6	23.6	22.6	24.5	6.7	6.3	5.4	6.1
Northern America	**18.6**	**19.1**	**18.9**	**19.2**	**5.7**	**5.5**	**5.1**	**5.4**
World	**17.3**	**17.0**	**18.4**	**18.8**	**5.0**	**4.9**	**5.4**	**5.7**

Source: OECD, Global Revenue Statistics Database.

Table 3. Annex 2. Regression analysis of social security contributions on informality

	Estimated coefficients and Standard Errors (OLS)
SSC	-0,0471 -0.161
Classn=1	70.47*** -6.863
Classn=2	71.44*** -8.078
Classn=3	41.80*** -8.171
Classn=4	0 (.)
Classn=1 # SSC	0.317 -0.366
Classn=2 # SSC	-0.34 -0.299
Classn=3 # SSC	-0.349 -0.367
Classn=4 # SSC	0 (.)
Constant	14.33** -5.396
Observations	83
R-squared	0.834
F-statistic	174.9

Source: author's presentation.

Table 4. Annex 3. More information on selected empirical studies

Authors	Study aim	Country	Data	Findings
Aşık, Bossavie, Kluve, Özen, Nebiler & Oviedo (2022)	Evaluate the impact of an employment subsidy scheme covering employers' social contribution costs on registered employment in small firms in Turkey in 2016	Turkey	Firm-level administrative dataset	The subsidy scheme had a sizable and positive impact on registered employment in small firms. Indicative evidence suggests that there was an increase in the likelihood of being formally employed after the policy change.
Balkan, Baskaya & Tumen (2016)	Estimate the effect of the subsidy programme on the employment probabilities of those in the target group in Turkey in 2008	Turkey	Turkish Household Labor Force Survey data	The subsidy programme has a positive impact on the employment probabilities of women, particularly on older women. The effect on younger men, however, is close to zero and even slightly negative for some specifications
Bennmarker, Mell&er & Öckert (2009)	Evaluate the effects of a 10-p.p. reduction in the payroll tax in the northern part of Sweden in 2002	Sweden	Annual firm-level data for the 2001–2004 period from Statistics Sweden	No employment effects among firms existing both before and after the reform. When they include entry and exit of firms, they find evidence of positive effects on the number of firms and a tendency to positive employment effects
Biró, Branyiczki, Lindner, Márk & Prinz (2022)	Study the heterogeneous impact of a large payroll tax cut for older workers in Hungary	Hungary	Administrative data	Employment increases most at low-productivity firms offering low-wage jobs. The effects are more muted for high-productivity firms offering high-wage jobs. Wages only increase at high-productivity firms
Bohm & Lind (1993)	Evaluate the effects of a 10-p.p. reduction in payroll taxes in Nortbotten (Sweden) in 1984 on employment. The reduction was limited to mining, manufacturing industry, tourism and some minor service sectors	Sweden	Not specified	No employment effects
Cruces, Galiani, & Kidyba (2010)	Study the effect of changes in payroll taxes on wages and employment in Argentina during 1995-2001	Argentina	Administrative data	No significant impact on employment and partial shifting to changes in wages
Egebark & Kaunitz (2014)	Examine whether targeted payroll tax reductions are an effective means to raise youth employment in Sweden. In 2007, employers' payroll tax was reduced by 11 p.p. for workers between 18-24 years old. In 2009, the rate was further reduced by 6 p.p. and extended to all workers under the age of 26.	Sweden	Yearly data on employment and demographic characteristics from Statistics Sweden and Structure of Earnings Survey	Small positive employment effect
Fernandez & Villar (2021)	Study the effect of a reduction in payroll contributions from 29.5% to 15% for employers of low-wage workers	Colombia	Gran Encuesta Integrada de Hogares (GEIH) y Encuesta Continua de Hogares (Continuous Household Survey) (ECH, 2002-2006)	The tax reform reduced the informality rate of the targeted population in 2-3.1 p.p.

Authors	Study aim	Country	Data	Findings
Garcia, Sachsida & Ywata de Carvalho (2018)	Study the effect of a reduction in employers' contributions from 20% to 1% or 2%	Brazil	Relação Anual de Informações Sociais (Rais) (2009-2015)	No significant impact on employment
Goos & Konings (2007)	Analyze the effects of payroll tax exemptions targeted at manual workers	Belgium	Panel of firm level data	Employment subsidies had a positive impact on manual employment and a positive but smaller impact on pre-tax wages. Moreover, the authors find that employment subsidies have increased employment but not wages by more in low-wage exporting industries
Gruber (1997)	Study the incidence of a reduction in payroll taxation of 25% over 6 years in Chile in the '80s	Chile	Survey of manufacturing plants with more than 10 employees for 1979-1986	Reduction in payroll taxation to firms has been fully passed on to workers in the form of higher wages, with no effect on employment levels
Huttunen, Pirttilä, & Uusitalo (2013)	Examine the impacts of a targeted low-wage subsidy in Finland in 2006 for old-age persons (over 54 years old)	Finland	Finnish Longitudinal Employee Employer Data	The subsidy had no effect on the employment rate or wages of the eligible groups, but it increased slightly working hours among those already at work
Johansen & Klette (1998)	Study how payroll taxes and investment subsidies affect wages and demand for labor and capital	Norway	Panel of plants from the Annual Manufacturing Census of Statistics Norway	Reductions in payroll taxes have a limited effect on employment through reducing wage costs, since pass-over effects on wages is estimated in the range of 60-100%
Korkeamaki & Uusitalo (2008)	Evaluate the effects of a regional experiment that reduced payroll taxes by 3–6 p.p. for 3 years in northern Finland	Sweden	Data from the Register of Enterprises and Establishments of each plant by Statistics Finland and Finnish Tax Administration	Half of the reduction in payroll taxes was shifted to an increase in wages. No significant effects on employment.
Kramarz & Philippon (2000)	Study the impact of changes of total labour costs on employment of low-wage workers in France in a period, 1990 to 1998, that saw sudden and large changes in these costs. They examine the transition probabilities from employment to non-employment and from non-employment to employment	France	Longitudinal data from the French Labor Force survey	Tax subsidies have a small and insignificant impact on entry from non-employment as well as on transitions within the wage distribution
Saez, Schoefer, & Seim (2019)	Analyze a large and long-lasting employer payroll tax rate cut from 31% down to 15% for young workers (26 or younger) in Sweden	Sweden	Administrative data registers at both the individual- and the firm-level, collected by Statistics Sweden for both individuals and firms	Find a zero effect on net-of-tax wages and positive effects on the youth employment rate of 2-3 p.p.

Source: Author's presentation.

Women in Informal Employment: Globalizing and Organizing (WIEGO) is a global network focused on empowering the working poor, especially women, in the informal economy to secure their livelihoods. We believe all workers should have equal economic opportunities, rights, protection and voice. WIEGO promotes change by improving statistics and expanding knowledge on the informal economy, building networks and capacity among informal worker organizations and, jointly with the networks and organizations, influencing local, national and international policies. Visit www.wiego.org

The International Labour Organization (ILO) is the United Nations agency for the world of work. The ILO brings together governments, employers and workers to drive a human-centred approach to the future of work through employment creation, rights at work, social protection and social dialogue.

Swedish International Development Cooperation Agency (Sida)

Sida is Sweden's government agency for development cooperation.