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Social Insurance, Informality and Labor Markets: How to Protect Workers While Creating Good Jobs

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ABSTRACT

Social Insurance, Informality and Labor Markets: How to Protect Workers While Creating Good Jobs

This paper provides an overview of the main findings of the book "Social Insurance and Labor Markets: How to Protect Workers While Creating New Jobs." The book conceptualizes and reviews the empirical evidence on the potential distortions that the social insurance system of a country can have on the supply and demand side of the labor market, and proposes options to address them. The overall message is that current Bismarckian systems are inadequate to extend coverage to the entire labor force of a country and that, at the same time, can affect the level and structure of employment – for instance, by promoting informality and reducing participation rates. These effects can be important enough to deserve consideration in policy discussion. In part, they are explained by a series of explicit and implicit taxes and subsidies that emerge as part of the design of health insurance, pensions, and unemployment benefits programs. Going forward, there a few general principles that countries can follow to expand coverage while reducing potential distortions in labor markets. First, giving more flexibility to individuals in the choice of the bundle of social insurance programs, the level of benefits, and the portfolio of investments (in the case of savings programs), while providing better information and incentives to enroll. Second, relying on explicit, integrated, and in some circumstances means-tested redistributive arrangements in order to better contribute to reduce poverty and inequality. Finally, from the point of view of labor markets, by aiming to reduce perceived tax-wedges. This could be done by better linking contributions to benefits, improving the quality of services, and financing redistributive arrangements through general revenues.

JEL Classification: J3, J6, H2, H3, I3, D3

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Introduction

Most countries implement mandatory insurance and savings programs to help individuals manage risks such as unemployment, disability, illness, longevity, or death. These schemes are often based on a "Bismarckian" model, where benefits are financed by mandatory contributions levied on salaried employment. This type of model faces severe coverage challenges in low and middle income countries, where a substantial part of the labor force, often the majority, is self-employed, or works in subsistence agriculture. In addition, in these countries, a large proportion of salaried employment does not contribute to mandatory insurance programs. There are various reasons for this: small, low productivity, firms might not be able to afford the necessary contributions, others are exempted from the mandate, and others, in the presence of low enforcement capacity, simply choose to evade. To cope with these challenges, in recent years, many countries have created non-contributory schemes to cover individuals with low or limited capacity to contribute who are working in the informal sector (see Chapter 2 by Kaplan and Levy). Still, in most countries coverage remains far from universal.

Although most of the policy discussions on social insurance have focused on issues related to equity, coverage, and financial sustainability, more recently, concerns have been raised about the effects that poorly designed insurance programs can have on labor markets. The empirical evidence is scant, but at least, theoretically, distortions may be generated from both the supply and demand sides. From the supply side, for instance, non-contributory programs targeted to informal workers can provide incentives to take informal jobs. Social insurance may also reduce incentives to switch jobs if benefits are not portable; provide incentives to withdraw early from the labor force if there are generous early retirement provisions; or reduce incentives to search for jobs when there are generous unemployment benefits. From the demand side, payroll taxes used to finance many programs can provide incentives to operate informally, or to offer informal contracts to workers, particularly when productivity levels are low.

This book aims to shed light on the question of how relevant these distortions are and what can be done to reduce them while providing adequate protection to workers. In this overview we conceptualize the linkages between the social insurance system of a country and the labor market and summarize the main findings and policy recommendations from the different chapters. The overall message is that social insurance programs can affect the level and structure of employment of a country and that these effects can be important enough to deserve consideration. In part, they are explained by a series of explicit and implicit taxes and subsidies that emerge as part of the design of the programs. Going forward, there a few general principles that countries can follow to expand coverage while reducing potential distortions in labor markets. First, giving more flexibility to individuals in the choice of the bundle of programs, the level of benefits, and the portfolio of investments (in the case of savings programs), while providing better information and incentives to enroll. Second, relying on explicit, integrated, in some circumstances means-targeted redistributive arrangements in order to better contribute to reduce poverty and inequality. Finally, from the point of view of labor markets, countries should aim to reduce perceived tax-wedges. This could be done by better linking contributions to benefits, improving the quality of services, and financing redistributive arrangements through general revenues.

Conceptualizing the Links between Social Insurance and the Labor Market

When social insurance programs are linked to the labor market status of workers, both in terms of eligibility for benefits and in terms of financing, they can affect labor supply and labor demand decisions. As described by Kaplan and Levy in this volume (Chapter 2), the tight link between social insurance and labor-market status in Latin America (as in many other emerging countries) is in part due to a series of historical and financial considerations. When social-security institutes were founded in Latin America in the 1940s and 1950s, most countries lacked the ability to collect general taxes from sources such as income or value-added taxes. Given the inability to finance some form of universal social insurance with general taxation, most countries implemented contributory (Bismarckian) social security systems financed with payroll contributions paid for, and for the exclusive benefit, of formal salaried workers.

In a Bismarckian system, the demand side of the labor market can be affected through pay-roll taxes (paid by employers) and social security contributions (paid by employees) that are often used to finance social insurance programs. These taxes/contributions increase the wedge between the cost of labor and take-home pay and can contribute to reduce formal employment, especially in low and middle income countries with low enforcement capacity. However, as discussed by Gillingham and Jousten at the end of the book (Chapter 15), it is important to note that not all contributions (by the employer and employee) to social security should be considered a tax. Instead, the focus should be on the perceived gap or wedge between the value of social insurance benefits to workers (measured by their willingness to pay) and actual social security contributions.

A number of factors may influence the perceived gap or "tax" component of social insurance. Perceived tax wedges can emerge if individuals do not value the benefits offered and, given the choice, would either prefer not to purchase them or purchase less of them. As discussed in the second part of the book, how much workers value benefits is not always however the result of a rational and fully informed process – myopia, for instance, can lead workers left to their own devices to choose to buy less insurance and/or have lower savings rates. Another factor are risk pooling arrangements, which often include an element of systematic, and often implicit, redistribution (e.g., from young to old workers in the case of health) that not all workers value.

In general, however, there are common design problems that may increase the gap between the actual costs of participating in the mandatory system and the perceived benefits. These may include, among others, poor quality of services, excessive "bundling" of benefits that are not universally valued, and contributions that are not linked to expected benefits (and therefore some individuals pay more than what they receive, with the surcharge financing the benefits of others). One example is when the benefit from a social insurance program does not vary across workers, while the contribution increases with wages, creating potentially large perceived tax wedges for high income workers. This problem is most obvious in the case of health insurance. Another example is when the social insurance program includes a benefit that is of value to only a subset of the participants, such as maternity benefits, which are of much greater value to workers who are of child-bearing age and want to have a family. In pensions, a gap may also subsist when the implicit rate of return on contributions is perceived by the worker to be too low. In essence, while employees may value some of the benefits that are provided by social security, and may be willing to pay for them, a real or perceived tax wedge can remain.

This tax wedge can provide incentives for employers to operate "informally," because it becomes more difficult to transfer the cost of insurance to workers in the form of lower wages. In that case, social insurance implies an increase in labor costs which may induce firms to offer informal contracts to some of their employees (particularly low skilled workers), or simply hire fewer workers. It has been observed, for instance, that in some countries, firms tend to maintain a size and organizational structure that legally exempt them from the mandate of the social security or other labor regulations (Garicano, Lelarge and Van Reenen 2012). Other firms simply might not have the level of productivity needed to afford labor and social insurance costs and therefore they self-select in the informal sector. Transfers to the unemployed that take the form of severance pay can also constrain decisions to dismiss workers and, as a result, can reduce incentives to hire formally.

The social insurance system can also affect labor supply. Tax wedges, real or perceived, can provide incentives to workers for taking informal jobs or becoming self-employed (see Levy 2008). In addition, tax wedges can interact with subsidies offered by social insurance programs, which can be of two types. First, *explicit* subsidies given to workers in the informal sector by means of "non-contributory" social insurance programs (e.g., health or pensions), which provide benefits to the uninsured and operate in parallel to contributory systems. Because formal workers pay for their benefits while informal workers get them free of costs, non-contributory programs can act as an additional tax on formal employment and provide incentives to enter the informal sector as wage employees or self-employed (see Levy 2008). The second are *implicit* subsidies *within* the contributory social insurance system. These take various forms, including "above market" rates of return on contributions, minimum pension guarantees, minimum unemployment benefits, or provisions for early retirement which are not actuarially fair (i.e., they do not take into account the full cost related to paying pensions for longer). These subsidies can also distort incentives and encourage early retirement, shorter enrollment periods in the social security, or reduce job-search efforts, leading to longer unemployment spells.

To date, however, many of these arguments remain working hypotheses. While the expected sign of the effects is often clear, their magnitude is uncertain. There has not been enough effort to document how different design features of the social insurance system affect the behaviors of firms and workers. This is particularly true when it comes to the effects of benefit payments on informality, inactivity and unemployment. The first part of this book aims to improve our understanding of these effects.

Assessing the Effects of Social Insurance on Labor Markets

Estimating the effects of insurance on behavior and outcomes is not trivial. Several of the chapters in this volume, however, take advantage of episodes of reform in social insurance to assess the impact of changes in the design and parameters of alternative programs on workers' and firms' behavior. The focus is on the effects that health insurance, pension, and unemployment benefits can have on formal and informal employment, unemployment, and inactivity. One of the chapters also analyzes the effects of payroll taxes on total employment levels.

The tight link between social insurance and the formal labor market makes the decision of whether to work or operate in the formal or informal sector one of the key margins of possible adjustment by workers and firms. There is an ongoing discussion in the literature on whether informal employment can be better explained as a situation of exclusion (informal workers would like to work in the formal sector but they cannot find formal sector jobs) or voluntary exit (informal workers escape the formal sector in order to avoid paying for social insurance benefits to which they assign little value). A parallel discussion frames these alternatives in terms of whether labor markets are segmented or not.

Two chapters identify effects that corroborate the predictions of models where (at least some) workers choose between formal and informal jobs. Bergolo and Cruces (Chapter 3) find that an increase in workers' valuation of social security benefits increases the probability of formal employment, defined as being registered in the social security. The authors take advantage of a health reform enacted in Uruguay in 2007, which extended healthcare coverage to the children under 18 of insured workers. To pay for such benefits, contributions increased for all workers, with higher premia for workers with children under 18 years old. The authors compare the probability of not being registered in social security for individuals with and without children under 18 years old before and after the reform. As it could be expected, the authors find that the healthcare reform significantly reduced private sector informal salaried employment for workers with at least one child (the group affected by the reform) relative to those with no children (the group not affected by the reform) by 5 percentage points. Interestingly, the effects were more important among women than among men, perhaps because they value more the benefits for their children. The effects were also larger among workers with secondary or tertiary education and for workers employed in smaller firms. The results hold when the authors take into account that household members may make joint decisions, and thus defining the household as the unit of observation. They find that the reform reduced the probability that both spouses were working informally, relative to households where at least one spouse worked formally.

Chapter 4 by Bosch, Cobacho and Pagés looks at the other side of the coin, that is, whether providing benefits free of charge to those who work in the informal sector increases informality. The authors summarize evidence examining the effects of the introduction of *Seguro Popular* in Mexico, a far reaching and ambitious program intended to provide health insurance to all workers not affiliated to social security. The program covers a pre-determined set of procedures and treatments, which have increased over time. While social security provides more and better coverage, the difference in benefits between the two types of programs has narrowed over time. Originally, the program intended to charge copayments to beneficiaries depending on income. In practice however, copayments have not taken place and the program is virtually free of charge. The analysis of the effects of *Seguro Popular* is interesting because of the program size, and also because it is representative of a wider trend: the expansion of non-contributory programs intended to cover the informal sector coexisting with similar social security programs paid for, at least partly, with the contributions of the affiliates.

Most of the studies measuring the impact of *Seguro Popular* take advantage of the gradual introduction of the program across Mexican states. In that way, studies compare formality shares at the individual, household and municipality level, in municipalities that already benefit from *Seguro Popular* relative to municipalities that do not. Overall, there is strong evidence that the program has been very effective at increasing health care coverage and reducing health expenditures for Mexican families. There is no evidence yet of statistically significant impacts on health outcomes, but those are likely to materialize in the future. At the same time, however, the establishment of a parallel non-contributory health system has so far generated an increase in the share of informal employment between 0.4 and 1 percentage points, or equivalently between 160.000 and 400.000 jobs over the 2002-2010 period. That is equivalent to 8-20% of net formal job creation during the same period.

Bosch, Cobacho and Pagés also provide evidence of the effects of similar non-contributory health programs in Mexico City and in Colombia. In Mexico City, a large negative impact on social security affiliation of least educated women was registered after the introduction of the program. In particular, the probability that low skilled women (high school education or less) worked in the formal sector was reduced between 4 to 9.7 percentage points after the policy change. Similar results have also been found in Colombia after the introduction of a non-contributory health program for informal workers. Such program increased informality between 2 and 4 percentage points, an effect larger than in Mexico.

In addition, the chapter shows that programs such as *Seguro Popular* can further affect workers' incentives in other relevant dimensions. They show, for instance, that the rollout of *Seguro Popular* was associated with an increase of flows from work to inactivity, and a decline of flows out of unemployment. These findings suggest that *Seguro Popular* made, for some, inactivity and unemployment more attractive.

Transfers through the pension system can also affect labor markets. In a companion paper to their contribution to this volume, Attanasio, Meghir and Otero (2012) describe the effects that an ambitious reform in Chile, which aimed at providing a minimum level of pensions to those who did not contribute enough during their active life, had on labor market participation and formal/informal work choices. In addition to a basic social pension, the reform instituted a pension subsidy to women designed to compensate for the fact that women tend to leave the labor market (and therefore interrupt their pension contributions) after having children. The reform also strengthened the contributory component of the system by subsidizing contributions for young workers, as well as offering tax incentives aimed at increasing the contributions of the self-employed. . The authors find that the introduction of a basic social pension for workers with insufficient contributions had a negative effect on labor market formality: the reform led to a reduction in informal employment of 4.1 percent for workers older than 40 years old. The reform also increased the propensity for women with children to drop out of the labor market due to the income effect associated with the pension subsidy for each child.

Unemployment benefits is another social insurance program that is becoming increasingly popular in middle income countries. On the one hand, the fact that unemployment insurance conditions a monetary payment on unemployment status makes one suspect that the scheme might generate incentives against finding or keeping a job. On the other hand, unemployment insurance may have positive effects on the labor market if they help workers find better jobs. Indeed, to the extent that unemployed workers face liquidity constraints, unemployment subsidies might permit workers to engage in more efficient search and find jobs that better match their skills and/or offer higher and more stable salaries. But how large are these effects?

Chapter 5 by Margolis, Navarro, and Robalino uses a Diamond-Mortensen-Pissarides labor market model of job search to assess the magnitude of labor market distortions associated with unemployment insurance in middle income countries. The authors consider four possible states for active workers: unemployment, self-employment, formal salaried work, and informal salaried work, and calibrate the parameters of the model to match the characteristics of the Malaysian labor market, which currently has no unemployment insurance. They find that, for replacement rates below 50 percent, the effects of unemployment insurance on the labor market are modest: unemployment insurance would only marginally increase the unemployment rate, although it would lead some unskilled workers to transit to self-employment. A larger replacement rate, however, would have a larger impact on the unemployment rate and would also induce higher-skilled workers to transit to self-employment. Part of the reason is that unemployment insurance induces more workers to wait for the "right" job. This increases the tightness of the labor market (i.e., the ratio between job seekers and vacancies) and reduces the probability of being offered formal and informal jobs. Individuals who wait too long might then end up having to take self-employment opportunities. Thenon-linearrelationship between the generosity of benefits and the types of workers drawn to self-employment illustrates the complex nature of unemployment insurance in a labor market.

In Chapter 6, Koettl and Weber address the question of whether it is worthwhile for the working age population to engage in formal employment in New Eastern European Member States of the European Union. They calculate a formalization tax rate that is linked to the level of the tax-wedge and forgone social assistance (i.e. transfers that would be forgone when formal jobs are taken). The main finding of the descriptive analysis is that the disincentives for formal work – when measured through the formalization tax rate – are especially high for low-wage earners. This suggests that formal work might not pay in this segment of the labor market, in particular for the so-called mini-jobs and midi-jobs (low paying part-time work). In the empirical analysis the authors further find a significant positive correlation between the formalization tax rate and the incidence of being informal. Controlling for individual and job characteristics, the higher the formalization tax rate or the marginal effective tax rates (METR)that individuals are facing is – that is, the higher disincentives for formal work – the higher the likelihood to work informally. The main driver of the disincentives in the case of the New Eastern European Member States seem to be forgone transfers.

All in all, this new wave of studies shows that the design of social insurance can affect economic behavior, notably in one crucial aspect for labor markets in developing countries: the formal/informal work margin. The magnitude of the measured distortions will likely depend on the characteristics of the programs and the context where they operate. But the effects seem to be large enough to deserve attention, and call for improvements in program design in order to reduce distortions while providing adequate protection to workers. This does not imply that the objective of policy should be to eliminate all labor market distortions. As stated by Barr and Diamond (2006), there is no way of designing social insurance and protecting workers without altering economic incentives. But the potentially distortive effects of social insurance must be taken into account as part of any reform endeavor, and must be weighed against the objectives achieved by social insurance. The next part of the book offers some lessons on how to move forward in this balancing act.

Setting the Mandate of the Insurance Programs

The effectiveness of social insurance systems in helping individuals manage social risks depends, to a large extent, on the bundle of benefits offered, and the redistributive arrangements used to reach individuals with no or limited contributory capacity. This part first discusses issues in defining the bundle and level of benefits, taking into account the heterogeneity of beneficiaries in terms of their risk profiles, preferences, and ability to save or afford insurance. Second, it looks at how to implement redistributive arrangements that are progressive, fiscally sustainable, and that minimize some of the labor market distortions discussed above.

Defining the Mandate of the Social Insurance System

A first policy question is whether social insurance programs should be mandatory. Mandatory programs are often justified based on imperfections in insurance markets that lead to adverse selection, and on the obscure term of “myopia,” i.e. the inability or unwillingness of individuals to plan for the future and make proper strategic choices about savings and insurance over their lifetime.

Chapter 7 by Robert Holzmann focuses on the issue of "myopia." The author shows that the concept embodies three very different aspects that call for different types of policy interventions: (i) lack of knowledge about financial concepts and products; (ii) limited cognitive abilities to solve complex inter-temporal problems regarding savings, investments, and insurance; and (iii) psychological factors that distort individual perceptions about risks and the future and that make it difficult to commit to save enough or purchase sufficient insurance. The chapter reviews countries' efforts to address these problems through programs aiming to improve financial literacy and to raise awareness about the importance of savings and insurance. It also discusses initiatives, mostly coming from the private sector and inspired by the work of behavioral economists and psychologists, to try to "nudge" individuals to save more or purchase more insurance.

Regarding interventions to improve financial literacy, Holzmann identifies two approaches that have been piloted. The first is a cognitive approach where the focus is on providing general knowledge about financial concepts and products, augmented by skills to apply this knowledge to achieve "good" financial behavior. The second is an outcomes-based approach that aims to directly influence behaviors that are considered important for "good" financial outcomes. These include, for instance, managing money (i.e., living within one's means and tracking one's expenditures); planning ahead; making choices based on an understanding of the options available; and knowing when and how to get help. A review of the limited number of evaluations of these two types of interventions shows however mixed results. For example, training programs in school or in the work place (e.g., retirement seminars) have not shown to increase participation on voluntary savings or insurance plans, even less in mandatory plans. The author argues that this is to be expected because, while improving knowledge, these programs do not deal with the non-cognitive and psychological factors that affect how individuals use their new knowledge and skills.

In terms of interventions that aim to "nudge" to certain behaviors, Holzmann describes some success stories. Financial incentives to promote participation in the 401 K retirement saving plan in the United States is one example. Another intervention is to ask individuals to commit to save future increases in earnings. Little is known, however, about how these incentives could work in the case of public programs. For instance, there have been several proposals to match the contributions of informal sector workers to promote their participation in public pension programs (matching contributions, as opposed to tax breaks, make more sense in environments where a majority of workers do not declare their incomes). But there are no evaluations to date offering evidence of the impact of these programs on take-up rates.

The results of the review suggest that governments cannot relinquish mandatory programs. The second question is then, how to define the mandate of these programs, that is, the set and level of benefits offered to individuals at different income levels.

Two chapters of the book point to an issue which is often overlooked: the difficulty in defining a benefit bundle that "fits all sizes." As discussed above, Chapter 3 by Bergolo and Cruces shows how different individuals (and households) derive different value from the bundle of social insurance benefits. A bundle that provides insurance to children, for instance, is unnecessarily expensive for childless families. Therefore, a universal bundle of social insurance benefits may fail to address the needs of many, reducing their incentives to pay for it under a payroll-based system.

Similarly, Chapter 8 by Sánchez Martín, Jiménez Martín, Robalino and Todeschini discusses the challenges involved in setting common contribution rates and investment portfolios in mandatory pension programs. The authors show that in an optimal life-cycle context, savings paths, and the composition of the optimal portfolio, depend on observable individual characteristics that affect labor income. They also depend on unobservable, individual preferences. In this environment, a common savings mandate and a single investment portfolio for all workers can be welfare decreasing, particularly if individuals cannot borrow. The chapter analyses initiatives by countries like Chile to offer default portfolios (often adjusted by age) that then individuals can tailor to their needs. Because, as it is well known, only few people switch to other portfolios, it is important to get these defaults right. Yet the chapter suggests that default portfolios tend to systematically deviate from optimal portfolios because they do not take into account variables such as individuals' level of education and their occupation that affect the mean and variance of labor income. Thus, while it might be that myopic individuals make bad investment decisions, the alternatives proposed by governments may not always score better.

The study for Chile also shows that an important design feature that would deserve more analysis in countries with "multi-pillar" systems is what share of the contribution rate should be invested in pay-as-you-go vs. financial assets. This share is usually decided as part of the political process driving pension reform and, as suggested by the chapter, it is unlikely to be the optimal share for many. These types of misallocation of savings may reduce incentives to enroll among certain categories of workers, in particular when enforcement capacity is low.

Both chapters do not question the need for mandatory social insurance, but show a need to have more flexibility in the way the mandate of various programs is defined. More emphasis could be placed on creating awareness among individuals about the risks they face, and on nudging them to enroll in insurance and/or savings programs (which could be public or private) through, for instance, financial incentives.

As mentioned before, there have been some positive experiences, in particular in the private sector, and variants for the public sector could be piloted and evaluated.

It is also important to reconsider the bundles of social insurance benefits that are offered, both in terms of composition and level of benefits. One possibility would be to limit the bundle of mandatory social insurance programs to those covering key risks – health, disability, longevity, death, and unemployment. It also seems worth exploring how to give more options to individuals. Governments, for instance, could offer as a default a basic level of benefits for the various programs, but may encourage individuals to opt for more, if needed, by providing information and training. Similarly, individuals could be given more choice in the composition of savings portfolios – including whether to invest in pay-as-you-go or financial assets – and more information to guide them. Clearly, too many choices can be overwhelming for individuals and managing multiple portfolios is administratively complex and costly. The right balance will depend on the institutional capacity of the social security institutions and country characteristics.

Designing Redistributive Arrangements

Redistribution is essential within the social insurance system to cover segments of society that may not be able to afford to participate in risk-pooling or savings programs. Most redistribution that takes place in social insurance systems in Latin America and elsewhere is, however, of the *implicit* type: it takes place because countries often rely on systems that do not link contributions to benefits and some individuals, not necessarily the poorest, *systematically* "get more" than what they put in, while others "get less." These implicit taxes or subsidies are often not related to people's means but to people's behaviors, including enrollment and retirement decisions, the decision to take formal vs. informal sector jobs, and job-search activity.

Chapter 9 by Alvaro Forteza looks at redistributive arrangements in pension and unemployment programs in Argentina, Brazil, Chile, Mexico and Uruguay. Forteza shows that, at least in the case of pensions and unemployment insurance, systems with implicit redistributive arrangements are not necessarily the most effective in reducing lifetime income inequality. In fact, the country in the study in which social insurance brings the highest reductions in inequality is Chile, where the contributory system is "actuarially fair" (contributions are equal to the expected cost of the benefits) and redistribution is explicit and targeted to low income workers (both within the pensions and unemployment benefits schemes) by means of "solidarity funds" financed out of general taxation. Chapter 10 by Attanasio, Meghir and Otero deepens the analysis of the Chilean pension system by showing that the 2008 reform introduced more flexible eligibility conditions to benefit from pension subsidies, increased pension wealth, reduced old-age poverty, and reduced the gender gap in pensions.

Part of the reason for the poor performance of implicit redistributive arrangements, especially in pension programs, is that low income workers may be less likely to access the benefits provided by the social insurance program due to low contribution densities. But eliminating the requirements for minimum vesting periods would render many programs unsustainable, unless benefits are adjusted accordingly. At the same time, implicit redistributive arrangements within the social insurance system can also reduce the willingness to contribute among those who systematically pay more than they receive. To the extent possible, countries would therefore need to rely more on *explicit* redistributive arrangements, ideally financed out of general revenues. But how these arrangements are designed matters. As discussed above, non-contributory programs that operate in parallel to contributory programs can act as a tax on formal employment, and if transfers are too high there can be negative effects on labor supply. The alternative would be to move to an integrated system of subsidies probably allocated on the basis of means, rather than on the basis of where individuals work. The subsidies, for instance, could take the form of *ex-ante* transfers to top-up the contributions of plan members, or *ex-post* transfers to complement the benefits. These two types of designs are likely to have different effects on behaviors and the finances of the system. For example, in the case of pensions, matching contributions could in principle provide incentives to contribute and therefore reduce the need for ex-post transfers.

A key policy decision in designing these explicit transfers is whether and how to target. Should redistributive transfers be universal, or concentrated in low income individuals with limited savings capacity? Universal transfers are less distortive because they only create an income effect, and are unlikely to change much labor supply decisions. At the same time, as shown in Chapter 11 by Acosta, Leite and Rigolini, universal programs can be significantly more expensive and are thus less effective in reducing poverty and inequality: with limited budgets, a universal transfer can end up “spreading resources too thin,” in particular in middle income countries where only a minority may need such transfers (in low income settings or areas with widespread poverty, it can however make more sense to consider universal transfers).

When subsidies are means-tested, attention needs to be given to the implicit marginal tax rates that are created. Classic minimum pension guarantees, for instance, impose a 100 percent marginal tax on contributions: for each unit increase in the contributory pension, the minimum pension guarantee is also reduced by one unit. This may reduce incentives to contribute, particularly among low income workers who know that, regardless of contributions densities, they will end-up retiring with the minimum. These marginal tax rates can be reduced, for instance, by reducing the subsidy gradually as pension income increase: the Chilean pension system is a good example of how this can be done, although a transfer that is too high may also affect labor supply through its income effect. In principle, minimum unemployment benefits could also be set at their maximum at the bottom of the income distribution and then decline gradually becoming zero after a given level of income.

Things can be more difficult in the case of ex-ante transfers – matching contributions – because of the need to be able to assess earnings, particularly outside of the formal sector. Proxy-means tests have proven successful in targeting transfers to the poor, but it is unclear that they can do the same in the middle of the income distribution (see Ribe et al. 2012). Moreover, given the sophistication of some of these schemes, attention should also be devoted to assess countries' capacity to implement them.

Financing a Universal Social Insurance System

A majority of countries in Latin America, as well as in other regions, finance social insurance programs through payroll taxes (paid by the employer) and individual contributions (paid by the employee). While, historically, it may have been the only way to develop social insurance programs, this type of financing now faces two major problems. First, payroll-based programs have failed to include a large number of self-employed, low income wage employees, and agricultural workers. Second, payroll taxes may drive low productivity firms to operate in the informal sector or offer informal work to some of their workers, also reducing coverage and possibly overall productivity (see Levy 2008; Ribe et al. 2012).

Chapter 12 by Lehmann and Muravyev presents a cross-country analysis for Eastern and Central Europe and Latin America, of the effects of employment protection legislation and the tax-wedge on a broad measure of informality – unreported income from the production of legal goods and services. The authors find evidence that a higher tax wedge is associated with a higher level of informality. On average, a 1 percentage point increase in the tax wage is associated with a 0.13 percentage points increase in informality. Other studies have found that a one percentage point increase in the tax wedge can reduce formal employment by between 0.1 and 0.5 percentage points (see World Bank 2013) and the most affected are likely to be unskilled workers.

These effects, of course, are country specific and will depend on various economic and institutional factors. Still, an important policy question is whether alternative financing mechanisms can be considered in order to reduce or eliminate payroll taxes and individual contributions. Reducing pay-roll taxes and individual contributions would imply relying more on general revenues. In essence, part of the cost of the bundle of social insurance benefits would be financed by general revenues (a same level for all or different levels based on means), while the difference is financed by individual and employer contributions linked to benefits. All in all, depending on the wiggle room that countries have to reallocate public expenditures towards insurance programs, more reliance on general revenues implies, however, finding ways to raise revenues from non-pay-roll taxes.

There are many taxes that could be considered and discussing their economic implications is outside the scope of the book. One option that has been proposed, and that is analyzed in Chapter 13 by Bird and Smart, is a consumption tax. The chapter looks at the pros and cons of moving from payroll taxation to value-added tax (VAT) financing in a context of high informal activity (measured, in this case, as firms evading taxes). The authors look at which form of financing minimizes labor market distortions and informal activity for a given level of revenues. They show that, to the extent that firms, in addition to workers, also choose whether to operate formally or informally, differences between labor (i.e. payroll) taxation and VAT are subtle. Either tax (or any tax, for that matter) creates incentives for tax evasion and informality. The nature and magnitude of these incentives differ nonetheless under VAT and payroll taxation, in part, by virtue of their different legal and economic structures. The authors argue that in principle, VAT has enforcement advantages over payroll taxation, because invoices may be checked, but although there is some evidence supporting this conclusion, the importance of this difference in practice seems to remain an open question. But using a simple model of a small open economy with heterogeneous firms, the authors also show that when there is an informal sector, a payroll tax can be more distortive than a consumption tax. In other words, for a given payroll tax τ, there is a value-added tax τ' that delivers the same real wage, the same level of economic activity, and the same shares of formal and informal employment, but *higher* tax revenues paid to the Government. While these implications remain to be tested empirically, overall their analysis suggests that moving towards VAT taxation, in addition to its main advantage of de-linking, at least part of, social benefits from an individual's labor market status, may deliver positive impacts on revenues and informal activity.

Bird and Smart, however, do not address the fiscal implications of reaching universal coverage. Even if financing, at least in part, social insurance through general taxation can reduce labor market distortions and help achieving universal coverage, the question of fiscal sustainability remains. In Chapter 14 of this volume, Arturo Antón and Fausto Hernández, analyze the feasibility and financial sustainability of a proposal first put forward by Levy (2008) for Mexico to finance universal pensions and health insurance by eliminating payroll taxes and increasing the VAT.

The authors address the question by means of a structural general equilibrium model with tax evasion that they calibrate to reflect the Mexican economy. In their model, there are three types of workers: employees formally registered to the social security systems, unregistered employees, and the self-employed who produce a similar good, albeit less efficiently. The authors consider then three different taxes on firms: value added taxes, income taxes, and social security contributions, with incentives to evade taxation varying with the type of tax. They find that a move toward VAT financing of social security to achieve universal coverage is not only financially sustainable, but may also reduce labor market distortions (though this latter finding depends, among others, on their assumption of an inelastic labor supply). Specifically, reducing VAT exemptions, and moving towards an uniform VAT rate of 16 percent would allow financing a universal social insurance program that provides similar health and pension benefits than the ones offered now by social security, but to everybody. Moreover, the scheme would be financially viable even after taking into account a transfer to poor households to compensate them for the VAT increase.

Concluding Remarks

The evidence collected in this book shows that the social insurance system interacts with labor markets in a number of margins. When designing new programs or reforming current ones, policymakers should therefore carefully study how workers and firms would react. Perceived tax wedges (driven by payroll taxes and the gap between the value of social insurance benefits and what individuals pay) can reduce formal employment; parallel non-contributory programs targeted to the informal sector can promote informality; general transfers, through their income effect, can reduce labor supply; and unemployment insurance can alter choices between unemployment, and formal, informal, and self-employment. The magnitude of these effects ultimately depend on context and the level of the explicit and implicit taxes and subsidies.

The chapters in the volume suggest three types of design enhancements that may improve workers protection while reducing distortions in labor markets.

First, countries could introduce more flexibility when setting the mandate of social insurance programs. Although difficult to enforce in the presence of large informal sectors, mandatory programs still have a role to play to deal with issues of adverse selection and individuals' myopia. But individual preferences and characteristics could play a larger role in defining the bundle and level of benefits, as well as the portfolio of investments in the case of savings schemes. This could help reduce perceived tax wedges and improve incentives to enroll. A possible avenue, for further analysis, could be to limit the bundle of social insurance benefits to core risks (very old-age, sickness, disability, long-term unemployment, and death) and providing a basic level of benefits – sufficient not only to prevent poverty but also to smooth consumption. In the case of pensions, for instance, the ILO standard of a 40 percent replacement could be the starting point. Individuals could then be "nudged" into saving more or purchasing additional insurance more specific to their needs within or outside the public system. Individuals could also be offered default investments portfolios that take into account characteristics such age, gender, education, and occupation, and then be given information and guidance to make adjustments that better tailor their needs. In the case of pension systems, for instance, individuals could be given the possibility to decide what share of their contributions is invested in pay-as-you-go assets and what into financial assets.

Second, while redistribution remains a fundamental instrument for protecting the neediest and reducing inequality, there are reasons to prefer explicit redistributive arrangements, possibly, especially if resources are scare, targeted based on means and not on where individuals work. This would allow social insurance programs to focus public resources on those who need them the most; better control the unintended effects on behaviors; and reduce reliance on pay-roll taxes, thus reducing perceived tax-wedges and improving incentives for formal work. To eliminate implicit redistribution, benefits would need to be linked to contributions. Explicit and integrated subsidies can then be used to top-up the contributions and/or benefits of individuals with low or limited savings capacity regardless of where they work.

Finally, there is a need to rethink financing mechanisms. In contributory systems, perceived tax-wedges can be reduced by better linking contributions to benefits; financing redistribution from general revenues; and giving individuals more choice in defining their bundle of social insurance benefits. But systems purely based on pay-roll taxes will not achieve universal coverage, in particular in low-enforcement settings common to most low and middle income countries. It is thus worth exploring ways to mobilize additional funds –in the form of individual contributions and other taxes – to finance a basic bundle of benefits for all workers.

Two relevant aspects where the book remains silent is the administrative complexity and political economy associated with the implementation and reform of social protection systems. Several of the reforms discussed here (e.g., targeting subsidies, linking contributions to benefits, introducing more individual choice) imply changes in business processes and improvements in management and information systems. And, although there is a good record of countries at all income levels that have been able to introduce some of these changes, for instance in the context of the implementation of social assistance programs (e.g., Pakistan) or defined contribution pension systems (e.g., Bolivia), the demands in terms of institutional capacity should not be underestimated.

Regarding the political economy, the reform of pensions, unemployment or other insurance programs is never easy. Studies suggest that the reforms that countries are able to implement depend on the quality of their policy making process (see Stein and Tommasi, 2008). The policy making process is affected by the number of political actors, their time horizons and the frequency of their interactions, the nature of the arenas in which they interact, the availability of enforcement mechanisms that bind them to their commitments, and the types of political institutions (e.g., the presidential/parliamentary nature of the government, the electoral rules, and the existence of an independent judiciary). Two challenges in the case of social insurance reforms are *timing* and the *representativeness* of different population groups. The benefits of the reforms are usually long-term, and uncertain, while the costs (e.g., rationalizing benefits) can be short term. Furthermore, those who would benefit the most from the reforms, for example informal sector workers and future generations, are often not well represented in the political process. It could be, however, that by making redistributive and financing arrangements explicit – one of the main ingredients of the reforms discussed above – the tradeoffs between different types of social expenditures become more transparent and that this in turn facilitates political consensus.

A final note is that the chapters in this book have not presented exhaustive evidence on how social insurance programs affect labor markets in general. The impacts discussed in the book depend on countries' enforcement capacities, the specifics of the labor market, workers human capital and preferences, and overall local conditions. Some distortions that may seem minor under a given setting may become important under different ones, and vice-versa. More research is needed to better understand these effects and to assess the impact of some of the reform proposals discussed here.

Notes

1 Given that there are various alternative definitions of informality routinely used in the literature, it is necessary to clarify what we mean by this term. Throughout this chapter, we refer to informal workers as those not covered by social security, either because they are not mandated to contribute (as it is the case with self-employed workers in some countries) or because their employers evade the mandate.

2 Other justifications such as imperfections in capital markets that preclude access to savings instruments or liquidity constraints, do not necessarily call for mandatory systems.

3 The argument, of course, does not apply to *ex post* redistribution motivated by risk pooling arguments.

References

Levy, S. (2008). Good Intentions, Bad Outcomes: Social Policy, Informality and Economic Growth in Mexico, Washington, DC: Brookings Institution Press.

Barr, N., Diamond, P. (2006). The Economics of Pensions, in: Oxford Review of Economic Policy, 22(1): 15-39.

Camacho, A., Conover, E., Hoyos, A. (2009). Effects of Colombia's Social Protection System on Workers' Choice between Formal and Informal Employment, Documentos CEDE No. 006003.

Garicano, L., Lelarge, C., Van Reenen, J. (2012). Firm Size Distortions and the Productivity Distribution: Evidence from France, mimeo.

Juárez, L. (2009). Are Informal Workers Compensated for the Lack of Fringe Benefits? Free Health Care as an Instrument for Formality, Centro de Investigación Económica, ITAM Working Papers No. 0804.

Ribe, H., Robalino, D., Walker, I. (2010). From Right to Reality. Incentives, Labor Markets, and Challenges of Universal Coverage in Latin America, Latin American Development Forum Series.

Stein, E., Tommasi, M. (2008). Policymaking in Latin America: How Politics Shapes Policies, Washington, DC: Inter-American Development Bank.