
17. Social budgeting

Krzysztof Hagemeyer and Wolfgang Scholz

17.1 INTRODUCTION

At the beginning of 2020 with the globally spreading pandemic of COVID-19 and all its social and economic consequences, the importance of having comprehensive, universal and effective social protection systems became once again – like during all the major economic and social crises before – very clear (Gentilini et al. 2020; Chapter 43 of this volume). Countries with strong social protection systems, although needing to enhance many benefit provisions and extend coverage to reach those in non-standard forms of employment, still were coping better with the pandemic and had better chances of cushioning the resulting economic downturn. However, we know from past experience that after the crisis is over, austerity measures may focus again on limiting social expenditure under all kinds of excuses.

The level of public social expenditure¹ relative to gross domestic product varies widely across countries (ILO 2010b, 2014a, 2017; World Bank 2018). However, it often consumes (and one can say – should consume) more than half of available public financial resources. Therefore, all social policy decisions have – apart from other important social and economic consequences – significant impacts on overall public finances. That is one of the reasons why social policy requires careful and comprehensive financial planning. Such planning has to be supported by quality statistics, reliable accounting and financial projections for different time horizons: short-term, covering the next budget year, but also medium- and long-term projections. Many social policy decisions have an impact on public finances over many years in the future, often affecting more than one generation (Cichon et al. 1999a).

Social protection (including health care) is one of the key areas of social policies, and also the one which consumes (also: should consume) the most significant resources. That is why the social budgeting approach described in this chapter has been developed to address challenges of coordinated social protection planning. However, the approach can be easily broadened to include other social policy areas like education, housing, water and sanitation and other social services.

There are also close relationships between different social protection programmes. For example, establishing an unemployment benefit programme involves, in addition to funding the cost of unemployment benefits, planning and funding effective employment services. It also requires implementing a whole range of other labour market programmes aimed at providing training, retraining and other services enhancing the employability of job seekers as well as stimulating the willingness of employers to provide decent jobs. Higher expenditure on education and vocational training today may in the long run increase employability and

¹ Including expenditure on social policies like health, non-health social protection, education, housing and other social services.

productivity and reduce poverty and thus decrease the future need for expenditure on poverty alleviation programmes.

Another example relates to the link between the cost of contributory and non-contributory programmes. Reforms of contributory pensions tightening entitlement conditions and strengthening the link between contributions paid and benefits received may significantly decrease both coverage and benefit levels. As a result, there may in the future be a need to allocate more resources to social assistance providing income support to the elderly.

A sound analysis of all the above has to be embedded into the demographic, labour market and economic context. Demographic changes, present and future labour force participation rates, as well as macroeconomic developments have impacts on public expenditure and revenue. Such a comprehensive planning of social protection finances, although practised in some countries – but far from everywhere – was promoted by the International Labour Office (ILO) and International Social Security Association for decades under the name of *social budgeting*.²

One can look at the social budgeting concept in a number of ways. It can be seen simply as a methodologically consistent compilation of the revenues and expenditures of a country's social protection system combined with projections and simulations into a medium-term period, and/or simulations under alternative scenarios. It is thus as a tool for the coordinated planning of national social protection systems. It serves also as a tool for monitoring past, current and future social protection finances. It is an indispensable tool for responding to the Social Protection Floors Recommendation No. 202 requirement that countries 'should monitor progress in implementing social protection floors and achieving other objectives of national social security extension strategies' (International Labour Organization 2012, art. 19).

Social budgeting allows us to identify – through established expenditure/revenue accounts for all existing social protection schemes – to what aims, within the social protection system of the country, resources are allocated and where these resources come from. In the next stage of the process, social budgeting helps us to identify what resources are needed in the future to finance existing schemes and how much it will cost in the short, medium or longer term to finance new, planned or existing but reformed schemes. Social budgeting thus consists of two basic components:

1. The statistical basis, i.e. the methodologically consistent compilation of the revenues and expenditures of a country's social protection system over a certain period in the past. Scholz et al. (2000) call this component the *social accounting system*. One can simply refer to it as financial social protection statistics (or national social protection accounting).³

² The term 'social budgeting' came to the ILO from the German Ministry of Labour that publishes a summary of social protection accounts under the name of 'Sozialbudget' (see Bundesministerium für Arbeit und Soziales 2018). Interestingly, the term 'social budget' comes from the literature devoted to social security much earlier, in papers written by the United States actuary W.R. Williamson presenting the social insurance system introduced in the 1930s as part of the New Deal (Williamson 1938, 1946a, 1946b).

³ Of course, there are other key elements of social protection statistics than just data on expenditure and financing sources – key for monitoring social protection system performance but also for making projections of its future costs and availability of fiscal space. One of the most important is statistics on coverage: on scope of coverage (what contingencies are being covered), extent of personal coverage (how many people are covered) and level or quality of coverage (level of benefits, quality of services).

2. The forecast of income and expenditure (budget projection), normally for a period of at least 10–15 years (although the old age pension component of the social budget requires projections with a much longer time horizon), and/or simulations of social expenditure and revenues under alternative economic, demographic and/or policy assumptions. The above book calls this component the *social budget*.

The following sections describe in detail both components of social budgeting: statistical and accounting foundations and modelling and projections.

17.2 BUILDING NATIONAL SOCIAL PROTECTION STATISTICS AND AN ACCOUNTING SYSTEM

This section looks at the requirements for establishing adequate national social protection statistical and accounting systems and associated challenges: what types of statistics are needed, what the statistical definitions of social protection are, what schemes are to be included and how to classify them to arrive at comprehensive national social protection accounts.

17.2.1 In Demand: Comprehensive National Social Protection Statistics

The efforts of achieving comprehensive and internationally harmonized statistics on social protection – similarly to what was achieved in the case of employment and unemployment or price statistics – go back to 1957 (International Conference of Labour Statisticians 1957). Data on all dimensions of social protection coverage and level of benefits, on expenditure and financing levels and composition are critical to assess and monitor the state of social protection in countries. Such data are of key importance to identify coverage gaps and define policies for improved coverage or enhanced effectiveness and efficiency of national social protection systems. Data in the design aspects of programme implementation such as the legal framework, governance and administrative structure, targeting mechanisms, eligibility criteria, graduation and exit rules are also fundamental for identifying areas of improvement and for building road maps for enhancing both programme performance and the overall provision of social protection across programmes.

The 1957 ‘Resolution concerning the development of social security statistics’ (International Conference of Labour Statisticians 1957) adopted during the Ninth International Conference of Labour Statisticians gives detailed guidelines on the social security system data and information that should be made available from both *administrative* and household *survey* sources. While European and some non-European Organisation for Economic Co-operation and Development countries seem to have largely met the requirements of this resolution, in many countries of the Global South information on their overall social protection/security system is still not regularly collected by national statistics organizations or any other responsible institutions. As a result, in many instances, social protection data are not available on a consolidated basis and are unlikely to be consistent and comparable across institutions and over time.

For definitions see the methodological annexes in ILO (2010a, 2017). See also International Conference of Labour Statisticians (1957).

Information and data on protected persons, beneficiaries, benefits paid, and services delivered, revenue raised from different sources and amount spent on benefits and on their administration have to be directly collected from registries, records and accounts of each of the institutions implementing the various social protection programmes. These data are crucial to the functioning of these schemes and for assessing their performance and sustainability. It is equally crucial for planning, budgeting and evaluating the overall social protection systems.

However, in many cases, some of these information and data are either not extracted from the records and accounts on a regular basis or may not be available at all (very often, for example, data on protected persons and on beneficiaries and benefits received disaggregated by their sex and age are not available; what prevents quality projections and budgeting often is the lack of effort made to separate the cost of administration and benefit delivery from the total spending of the benefit scheme).

While the above data from administrative sources are indispensable, the sources, even if high quality, cannot tell us anything about those who are not covered. That is why other important sources of information and data to assess the performance of social protection schemes and systems are regular household surveys (like household budget, income/expenditure, living conditions and labour force surveys). However, many household surveys do not include on a regular and standardized basis questions on social protection programmes which would enable us to identify who and with what labour market status is protected (and who not), by what programme and what the amounts of particular benefits received are, etc. Lack of survey data (especially visible in lower-income countries of the Global South) makes it impossible to estimate effective coverage, coverage gaps and effects of social protection systems and associated fiscal effort on income distribution of these countries.

17.2.2 Inventory of Social Protection Schemes: What to Include in the Social Protection System and How to Classify It

The first step for any country in building its national social protection statistical system is to decide what is the agreed scope of social programmes which one wants to include in the system. There is no one, universally accepted definition of social security and/or social protection.

According to EUROSTAT (2019), the operational definition of social protection for statistical purposes is that social protection encompasses all interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs. According to this definition what distinguishes social protection from other social arrangements is that: (1) benefits are provided to beneficiaries as *transfers*, without any simultaneous reciprocal obligation (thus it does not, for example, represent remuneration for work or other services delivered⁴); and (2) that it is not based on an individual agreement between the protected person and provider (as, for example, a life insurance contract) but the agreement applies to a wider group of people and so has a collective character (in this sense a group health

⁴ In this context, it is interesting to discuss to what extent public works schemes and related could be seen as transfer and thus social protection. In the authors' view public works or similar schemes can be seen as social protection transfers only to the extent to which work is paid more than the remuneration prevailing at the labour market. Thus, if people engaged freely in public works do work for which nobody else would pay, then what they get might be seen as social protection.

insurance, life insurance or pension insurance provided by the employer belongs to social protection).

Access to social protection is, in its essence, a public responsibility, and is typically provided through public institutions, financed either from *contributions* or *taxes*. However, the delivery of social protection can be and often is mandated to private entities. Moreover, there are many privately run institutions (group insurance,⁵ self-help, community-based or of a mutual character) which can partially assume selected roles usually played by public social protection. This includes, for example, occupational pension schemes, which complement and may substitute in considerable measure for elements of public pension schemes.

Although social protection benefits are transfers and thus should not be linked to any ‘simultaneous reciprocal obligation’, entitlements to those benefits are always conditional either on the payment of social security contributions for prescribed periods (i.e. *contributory schemes*, most often structured as *social insurance* arrangements) or on a requirement, sometimes described as ‘residency plus’, under which benefits are provided to all residents of the country who also meet certain other criteria (i.e. *non-contributory schemes*, *social assistance programmes*). Other criteria may make benefit entitlements conditional on age, health, labour market, income, assets or other determinants of social or economic status and/or even conformity to certain forms of behaviour (as in the case of unemployment insurance which usually requires from the unemployed beneficiary active search for employment; or in the case of so-called ‘conditional cash transfers’ where beneficiary households are required to enrol in certain public-service programmes like health or education). Such obligations have nothing to do with ‘reciprocity’ although they aim to induce certain behaviour.

After deciding what scope of social protection system it wishes to monitor, every country should build, maintain and regularly update an inventory of its social protection schemes.

Detailed qualitative information about different social protection schemes, in addition to data on expenditure and financing, are crucial for planning and social budgeting. Only by knowing detailed entitlement conditions embedded in the scheme’s qualitative information, is one able to plan the future numbers of beneficiaries and estimate their future benefit amounts and thus assess the level of resources needed to finance each of the schemes belonging to the national social protection system.

Qualitative information on social protection schemes describing their purpose and character allow us to identify what function, purpose or policy area these schemes serve. This is very important from the point of view of the planning and budgeting of national social protection systems to identify the functional structure of public expenditure in general (what public resources are allocated to social protection as compared to other purposes) and, in particular, within social protection how much is allocated to different functions or policy areas like health care, income security of the elderly, families with children, the unemployed, etc. Such knowledge allows us to assess the opportunity costs of various allocative decisions and identify if fiscal space made available for some policy areas is not crowding out the potential fiscal space to meet other, unfulfilled social needs.

A good practice example which may serve as a model for all the countries developing social budgeting and the necessary supporting databases is the Mutual Information System on Social Protection database covering all the European Union (EU) member countries. Internationally,

⁵ However, any insurance based on individual and not group contact with the insurer is not recognized as social insurance – see the EUROSTAT definition of social protection above.

for non-EU countries, partial inventories of social protection schemes with detailed qualitative information are included in the Social Security Throughout the World database available either at the United States Social Security Administration web pages or at the International Social Security Association web platform. For social assistance schemes, there have been over the years efforts by various institutions to establish and maintain social assistance scheme inventories in the countries of the Global South and related databases with mainly qualitative information.⁶

17.2.3 Establishing Social Protection Accounts and Aggregated Social Budget

Identified social security schemes, programmes and measures should be seen as a ‘distinct body of rules’ (EUROSTAT 2019) and, therefore, characterized by at least a certain degree of ‘formality’, supported by one or more institutions governing the provision of social protection benefits and their financing.

For the purpose of establishing a comprehensive system of accounts balancing social protection expenditure and financing, it should, in general, be possible to draw up a separate account of receipts and expenditure for each social security scheme. For analytical, evaluation and planning purposes it is also key to be able to separate expenditure on benefits from those on administration or those allocated to other purposes (like transfers to other social protection schemes, to reserves, etc.).

It is equally important to identify what kind of benefits are financed by a scheme (cash or in-kind, means tested or not, periodical or one-off, etc.). On the receipt side one should be able to separate revenue coming from different sources: from social contributions paid by employers, contributions paid by employees and other protected persons, other co-payments or direct out-of-pocket payments from households, from the general or earmarked taxes collected by the governments at the central, state or local level, from donors (multi or bilateral), from private donations, etc.

Ideally, it should be possible for each of the schemes to draw up a separate account of receipts and expenditure (Table 17.1).

Table 17.1 Social protection receipts and expenditure

Receipts
Social security contributions (by type and source).
Government financing (by type and level of government).
Transfers from other schemes.
Other receipts (including property/investment income).
Expenditure
Social benefits (by type, by function, by age of beneficiary).
Administration costs (by type: staff/non-staff).
Transfer to other schemes.
Other expenditure.

⁶ See the Social Assistance in Developing Countries database developed by Armando Barrientos and his collaborators at Chronic Poverty Research Centre (www.chronicpoverty.org/publications/search/simple/doctype/10) and the Social Assistance, Politics, and Institutions database at UNU-WIDER (www.wider.unu.edu/project/sapi-social-assistance-politics-and-institutions-database). See also the World Bank’s ASPIRE database and its Safety Nets reports.

It is only sometimes the case that a single social security scheme provides protection against a single risk or need and covers a specific group of beneficiaries administered separately from other schemes. It is then relatively easy to identify patterns and the nature of expenditure and financing, as well as policy objectives of the fiscal effort, that identifies the policy area (function) to which resources were allocated and spent. Often, however, one institution or department administers more than one social protection scheme. For example, in many countries social insurance institutions administer many separate schemes (like old age, survivors' and disability pension schemes, and sometimes in addition short-term benefits like sickness and maternity payments).

Sometimes all these different schemes are also financed not by separate scheme-specific social contributions but by a generalized social contribution aimed at financing all the social insurance benefits. Often a bundle of quite different social assistance and poverty alleviation schemes are administered by one welfare department of a given ministry and financed from the budget allocation to the supervising line ministry.⁷ In the above situations it might be difficult or even impossible to assign administrative costs or particular financing sources to individual benefit schemes. It might also be difficult to link resources allocated to specific functions or policy areas.

Functional classifications of social protection expenditure are extremely important as they allow us to find out if overall allocation of resources responds to policy priorities and objectives attached to different functions of social protection and policy areas. The same applies to the possibility of classifying social expenditure by the age of the main recipients. If benefit expenditure is not classified functionally (and by age) at the scheme level it would be difficult to achieve the classified expenditure at the aggregated level.

In most countries, specific functions of social protection (like providing income security to the elderly, health care to the population, income support to the unemployed, etc.) are not performed by a single scheme but by programmes of very different nature aimed at different groups of employed, economically active or the general population. For example, old age pensions are provided nearly everywhere by more than one scheme and administered by different institutions: often there is a general scheme for employees (sometimes only in the private sector), another separate scheme for government employees and a special one for the self-employed, for farmers, etc. In addition, there are occupational pension schemes.

Health-care systems are often even more fragmented, consisting of a set of social insurance and private insurance subsystems as well as government systems, which are charged with certain delivery functions for the total population and/or to provide comprehensive services for those who cannot afford coverage under the other schemes.

All the social security schemes and institutions in a country are inevitably interlinked and complementary in their objectives, functions and financing, and thus form a national social security system. For reasons of effectiveness and efficiency it is essential that there is close coordination within the system, and that – not least for coordination and planning purposes –

⁷ The need for a proper separate accounting of administrative costs and financing sources for each of the benefits serving different social protection purposes discussed above is not contradictory with the need to have a coordinated planning of social protection and governance systems integrated as much as possible. But, within such integrated governance one should establish transparent accounting procedures which allow the identification of what resources are allocated to different policy areas, functions or purposes and how much of these resources are consumed by administration and delivery costs.

the receipts and expenditure accounts of all the schemes are compiled into one social security budget for the country so that its future expenditure and financing of the schemes comprising the social security system are planned in an integrated way.

17.3 PROJECTING SOCIAL PROTECTION ACCOUNTS INTO THE FUTURE

This section looks first at the need for projections over various time horizons for social protection planning and budgeting; it then looks at various approaches and methodologies applied.

Decision making is about the future. Taking decisions about social protection systems *today* means to make more or less well-informed ‘good guesses’ about their *future* development with and without these decisions. For example, responding to concerns that pension entitlements might grow to be a burden for future generations, reliable forecasts are necessary if one wants to rebalance social and economic policies early, if necessary.

ILO Convention No. 102 on Minimum Standards in Social Security requires (in its article 71, 3) that:

[The country] shall accept general responsibility for the due provision of the benefits provided in compliance with this Convention, and shall take all measures required for this purpose; it shall ensure, where appropriate, that *the necessary actuarial studies and calculations concerning financial equilibrium are made periodically and, in any event, prior to any change in benefits, the rate of insurance contributions, or the taxes allocated to covering the contingencies in question.*

The Income Security Recommendation, 1944 (No. 67) specifies here that contribution rates to social insurance schemes should not exceed the rate necessary to ensure what we can call ‘collective financial equivalence’ (Cichon et al. 1999a, 225) – that is, *the rate which would yield, in the future, contribution income from all the insured persons such that its expected present value would be equal to the expected present value of the benefits due in the future to all those insured and their dependants.* However, Recommendation No. 67 advises also that ‘the rates of contribution of insured persons and employers should be kept as stable as possible, and for this purpose a stabilization fund should be constituted’.

One should note here that although relative stability of the contribution rates is seen as an important objective, in the end the contribution rate is the variable which should be adjusted so that the present value of the future revenue stream matches the present value of the expenditure necessary to provide benefits at desired adequate levels, levels which at least meet the requirements of the ILO minimum standards.

There is a close link between sustainability and adequacy of benefits; one can even say that both notions are two sides of the same coin (Hagemeyer and Woodall 2014). Inadequate benefits will not find enough willingness on behalf of contributors and taxpayers to finance them and sooner or later the scheme or system will become unsustainable. On the other hand, when generous benefit promises are not matched with sufficient and sustainable financing, later these promises will not actually be delivered. And this is exactly why every three years the European Commission publishes its reports on the fiscal consequences of the ageing population presenting results of the social expenditure projections for all the EU member countries coming from the social budgeting type model (European Commission 2018a). This is published in parallel with another report on pension adequacy (European Commission 2018b).

The above represents a different approach to sustainability than the one referred to in Boado-Penas and Vidal-Melia's paper, one of the most widely accepted definitions of sustainability: *a position where there is no need to increase the pension contribution rate in the future* (2012, 451).

Projecting the future development of social protection finances requires quantitative models that allow projecting future streams of revenues and expenditure with a reasonable degree of reliability. Good models should have high explanatory power in forecasting social expenditure and revenue. They do not only provide insights into the possible future development of social protection finances, but also allow us to establish scenarios with different assumptions concerning socio-demographic and economic conditions, and to assess the effects of different policies under these circumstances.

Models allowing detailed projections of social protection expenditure and revenue of the country are in most cases simulation models consisting of population projections, labour market projections/assumptions/scenarios, economic projections/assumptions/scenarios, public finance and fiscal projections/assumptions/scenarios and then separate modules for every social protection scheme covered by the *social budget*. In models described and used by the ILO (Scholz et al. 2000) and by the European Commission (2017) these social protection modules are usually cohort-based, *actuarial* type models (Plamondon et al. 2002).

Some countries used to alternatively project expenditure of certain social protection schemes (mainly pension schemes) through dynamic *micro-simulation* models (see for example Dekkers et al. 2012). In actuarial models, projections over time is the situation of *cohorts* (that is groups of persons born in the same year). In such models, in which cohorts are treated as a homogenous unit, it is thus rather difficult to introduce into analysis and projections the redistributive consequences of the projected/simulated processes. An advantage of micro-simulation models (where that projected is the situation of *individuals* and *households* in the representative sample) is that they allow simulations of both fiscal and redistributive implications.

Alternatively to the simulation models (usually of a 'what if' nature), to assess long-term fiscal implications of social protection and its reforms one can use computable general equilibrium models; however, usually such models allow only for a very aggregated approach (see for example Hagemeyer et al. 2015; Tyrowicz et al. 2018) but have the advantage of mapping interlinkages between social protection and (at least some aspects of) the economy.⁸

⁸ Computable General Equilibrium (CGE) models specify all their economic relationships in mathematical terms and put them together in a form that allows the model to predict changes in variables such as prices, output and economic welfare resulting from a change in economic policies, given information about technology (the inputs required to produce a unit of output), policies and consumer preferences. They do this by seeking prices at which supply equals demand in every market of goods, factors or foreign exchange. The models have their limitations, however. First, CGE simulations are not unconditional predictions but rather thought experiments about what the world would be like if the policy change had been operative in the assumed circumstances and year. The real world will doubtless have changed by the time we get there. Second, while CGE models are quantitative, they are not empirical in the sense of econometric modelling: they are basically theoretical, with limited possibilities for rigorous testing against experience. (from: www.gtap.agecon.purdue.edu/models/cge_gtap_n.asp).

Whatever analytical modelling approaches are chosen long-term forecasting has to cope with numerous uncertainties (elaborated also in Table 17.1). Peter Heller (2003) lists a number of them:

- *Uncertainty within existing economic and demographic structures and systems.* Models' parameters are estimated based on past trends; the same applies to assumptions necessary for the projections. We are however always uncertain as to what extent past trends and behavioural patterns will continue in the distant future and what structural changes the future will bring. High uncertainty is, for example, associated with assumptions about the speed of mortality improvements and about fertility rates one makes when producing population projections. When making projections about future costs of health care, we are uncertain if the current age profiles of health expenditure will persist. We can also make only very uncertain assumptions about the future pace of a so-called 'medical inflation' (see also Cichon et al. 1999b).
- *Uncertainty about expected changes in structures and systems.* Even if we know that there will be structural changes in the systems we project, it is very difficult to estimate the probability distribution of those changes. We may be sure that *downward* trends in fertility rates will be stopped or even reversed; it is quite impossible to reasonably guess the size and timing of this reversal (see Heller 2003, ch. 47).
- *Uncertainty about global effects.* Taking into account globalization processes, it is rather difficult to assess how demographic ageing will affect global savings, *investments* and interest rates. It is equally difficult to say how migration dynamics will develop, taking into account possible growth of income differentials between North and South and thus how this will affect demographic and economic structures (see Heller 2003, ch. 49).
- *Uncertainty about interactions between policy variables and economic and demographic variables.* Our perception of demographic ageing affects our policies: governments try to enhance labour force participation, particularly of *women* and older workers, to induce people to retire early. There may be similar policies put in place to induce higher fertility. There is however a lot of uncertainty about the impact that these policies will have on people's behaviour with respect to their labour market decisions or decision to have children. It is also difficult to predict how the expected situations of labour shortages in Europe will change prevailing policies towards migration and how this will affect people's behaviour towards retirement and other life-cycle decisions.

17.4 CONCLUSIONS

Social budgeting and related concepts are rooted in the understanding that social protection is an interlinked system and has to be planned and managed in a coordinated way. Quantitative tools are aimed to support such coordinated planning and ensure good governance of social protection systems, but social protection systems face all kinds of challenges: economic and financial crises, spread of informality and non-standard forms of employment, demographic transitions, globalization, climate change as well as other local, regional and global challenges.

Many countries have introduced social budgeting tools and use them regularly to monitor current and future finances of social protection systems and their longer-term impacts. EU member countries agreed to publish every three years comprehensive long-term projections

of their age-related (and thus practically all) social expenditure (European Commission 2017, 2018a). Countries at different stages of development of their social protection systems have implemented projects aimed at developing social protection systems of accounts and quantitative models allowing projections and simulations of the financial and fiscal effects of their social protection strategies: Namibia (ILO 2014b), Poland (Wóycicka 1999a, 1999b), Slovakia (ILO 1994), South Africa (Oxford Policy Management 2012), Tanzania (ILO 2008b), Ukraine (ILO 1998), Zambia (ILO 2008a) and Zanzibar (ILO 2010b).

Unfortunately, many of these efforts were implemented as projects and have not succeeded in ensuring continuation. For example, in South Africa, the Department of Social Development commissioned the development of social protection accounts and simulation models to an external team of experts with a plan to build and train the internal unit within the ministry to maintain and update the tools and thus provide analytical support to the government in strengthening the national social protection system and ensure its fiscal sustainability. Unfortunately, although data were collected, models developed and reports prepared, due to a number of institutional obstacles within the government, the hope to enhance departmental capacity has not materialized.

Lessons learned from many country projects aimed at institutionalizing social budgeting are that the conditions for sustainability of such endeavours are (a) the sustained need (demand) for tools supporting coordinated social security planning; (b) the existence of the institution(s) responsible for such planning; and (c) sustained professional capacity to maintain and update the tools. However, the condition is that the necessary information and data are regularly produced by social protection institutions in a harmonized way, that these data are collected, compiled, analysed and published. And this last condition seems to be very difficult to meet in many countries – in particular lower-income countries of the Global South.

There are two main reasons for the data problem. The first is a lack of agreed international standards in measuring social protection expenditure, revenue and coverage – similar to the global standards we have in the areas of national accounting (and even national health accounting) and in measuring unemployment or inflation. The second is the fact that many countries lack the necessary statistical capacity to produce the required information and data. Both require intense international cooperative effort – to agree on statistical standards and make them known and applicable everywhere and to support the lower-income countries in building their technical capacity to implement these standards. The Social Protection Inter-Agency Collaboration Board, at its third meeting in February 2013, outlined the necessary steps aimed at improving the situation (developing globally adopted statistical standards, harmonization of existing international databases and building statistical capacity of lower-income countries) in a document jointly prepared by the ILO and the World Bank (SPIAC-B 2013).

However, not many of the necessary actions discussed have actually been implemented. While there is a growing understanding in all countries of the data requirements for sound governance of social protection systems (see also Chapter 33 in this volume), progress – in particular in lower-income countries – is very slow.

REFERENCES

- Boado-Penas, Maria del Carmen and Carlos Vidal-Melia (2012). The actuarial balance of the PAYG pension systems: The Swedish NDC model versus DB-type model. In Robert Holzmann, Edward Palmer and David Robalino (eds), *Nonfinancial Defined Contribution Pension Schemes in a Changing Pension World*. Washington, DC: World Bank, 443–79.
- Bundesministerium für Arbeit und Soziales (2018). *SozialBudget 2018*. Bonn: BMAS. www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/a230-18-sozialbudget-2018.pdf?__blob=publicationFile&v=2
- Cichon, M. et al. (1999a). *Financing Social Protection*. Geneva: ILO. www.ilo.org/gimi/gess/RessourcePDF.do?ressource.ressourceId=8030
- Cichon, M. et al. (1999b). *Modelling in Health Care Finance: A Compendium of Quantitative Techniques for Health Care Financing*. Geneva: ILO/ISSA. www.ilo.org/wcmsp5/groups/public/---ed_protect/--soc_sec/documents/publication/wcms_209903.pdf
- Dekkers, G., S. Inagaki and R. Desmet (2012). Dynamic microsimulation modeling for policy support: An application to Belgium and possibilities for Japan. *Review of Socionetwork Strategies* 6, 31–47.
- European Commission (2017). The 2018 ageing report: Underlying assumptions and projection methodologies. https://ec.europa.eu/info/sites/info/files/economy-finance/ip065_en.pdf
- European Commission (2018a). The 2018 ageing report: Economic and budgetary projections for the EU member states (2016–2070). https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en
- European Commission (2018b). Pension adequacy report 2018: Current and future income adequacy in old age in the EU. Brussels: European Commission. Vol. 1: <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8084&furtherPubs=yes> and Vol. 2: <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8085&furtherPubs=yes>
- EUROSTAT Statistical Office of the European Communities (2019). European system of integrated social protection statistics (ESSPROS): Manual and user guidelines. Brussels: EUROSTAT. <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-19-014>
- Gentilini, Ugo, Mohamed Almenfi, Ian Orton and Pamela Dale (2020). Social protection and jobs responses to COVID-19: A real-time review of country measures. <https://socialprotection.org/discover/publications/social-protection-and-jobs-responses-covid-19-real-time-review-country>
- Hagemeyer, Krzysztof and John Woodall (2014). How should the adequacy of pension coverage be balanced against financial sustainability? *Australian Journal of Actuarial Practice* 2, 21–31.
- Hagemeyer, Jan, Krzysztof Makarski and Joanna Tyrowicz (2015). Analyzing the efficiency of the pension reform: The welfare effects of various fiscal closures. *Macroeconomics Dynamics* 21 (5), 1205–34. <https://doi.org/10.1017/S1365100515000383>.
- Heller, Peter (2003). *Who Will Pay? Coping with Aging Societies, Climate Change and Other Long-Term Fiscal Challenges*. Washington, DC: IMF.
- International Conference of Labour Statisticians (1957). Resolution concerning the development of social security statistics, adopted by the Ninth International Conference of Labour Statisticians. www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087550/lang--en/index.htm
- International Labour Office (1994). Social protection expenditure in Slovakia: Results of a quantitative analysis. Bratislava: ILO.
- International Labour Office (1998). Social budgeting in Ukraine. Report of joint task force in collaboration with the International Labour Organization, the World Bank and the UN Office in Ukraine. Budapest: International Labour Office.
- International Labour Office (2008a). Zambia social protection expenditure and performance review and social budget. Executive summary and full report. Geneva: ILO Social Security Department. www.social-protection.org/gimi/ShowRessource.action?id=6350
- International Labour Office (2008b). Tanzania mainland: Social protection expenditure and performance review and social budget. Executive summary and full report. Geneva: ILO Social Security Department. www.social-protection.org/gimi/ShowRessource.action?id=7452

- International Labour Office (2010a). World social security report 2010/2011: Providing coverage in the time of crisis and beyond. Geneva: ILO. www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_146566/lang--en/index.htm
- International Labour Office (2010b). Zanzibar: Social protection expenditure and performance review and social budget. Executive summary and full report. Geneva: ILO Social Security Department. www.social-protection.org/gimi/ShowResource.action?id=16253
- International Labour Office (2014a). World social protection report 2014/2015: Building economic recovery, inclusive development and social justice. Geneva: ILO. www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_245201.pdf
- International Labour Office (2014b). Namibia social protection floors expenditure and performance review and social budgeting report. Pretoria: ILO.
- International Labour Office (2017). World social protection report 2017–2019: Universal social protection to achieve Sustainable Development Goals. www.social-protection.org/gimi/gess/ShowWiki.action?id=594
- International Labour Organization (2012). Social protection floors recommendation, 2012 (No. 202). www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R202
- Oxford Policy Management (2012). South Africa Social Budget: Report on the Social Budget Model and Projections. Pretoria: OPM.
- Plamondon, P. et al. (2002). Actuarial practice in social security. Geneva: ILO/ISSA. www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_secsec_776.pdf
- Scholz, Wolfgang, Michael Cichon and Krzysztof Hagemeyer (2000). Social budgeting. Geneva: ILO/ISSA. www.social-protection.org/gimi/gess/ResourcePDF.action?id=8022
- SPIAC-B (2013). Joint proposal on international social protection data harmonisation. Input to the 3rd SPIAC-B meeting. 11 February. New York: ILO. www.ilo.org/newyork/at-the-un/social-protection-inter-agency-cooperation-board/third-meeting/WCMS_227154/lang--en/index.htm
- Tyrowicz, J., K. Makarski and M. Bielecki (2018). Inequality in an OLG economy with heterogeneous cohorts and pension systems. *Journal of Economic Inequality* 16, 583–606.
- Williamson, W.R. (1938). Social budgeting. *Proceedings of the Casualty Actuarial Society*, 24, 17–34.
- Williamson, W.R. (1946a). Budgeting for social security. *Journal of Gerontology* 1 (1, 1, January), 60–71.
- Williamson, W.R. (1946b). Budgeting for social security. *Journal of Gerontology* 1 (1, 2, January), 35–40.
- World Bank (2018). State of social safety nets report. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/29115>
- Wóycicka, I. (ed.) (1999a). *Budżet polityki społecznej*. Warsaw: Instytut Badan nad Gospodarka Rynkowa.
- Wóycicka, I. (ed.) (1999b). *Strategia polityki społecznej*. Warsaw: Instytut Badan nad Gospodarka Rynkowa.

Databases

- Asian Development Bank: Social Protection Index: <https://spi.adb.org/spidmz/>
- European Commission: Mutual Information System on Social Protection: www.missoc.org/
- European National Transfer Accounts: www.agenta-project.eu/en/dataexplorer.htm
- EUROSTAT statistical database: <http://ec.europa.eu/eurostat/data/browse-statistics-by-theme>
- German social budget over years: www.deutschlandinzahlen.de/tab/deutschland/soziales/sozialbudget-sozialausgaben/sozialbudget
- Global National Transfer Accounts Project: www.ntaccounts.org/web/nta/show/
- International Labour Office: World Social Protection Report data: www.social-protection.org/gimi/ShowWiki.action?id=594#tabs-3
- International Labour Office: Social Security Inquiry: www.social-protection.org/gimi/ShowTheme.action?id=10
- International Monetary Fund: Government Finance Statistics: <http://data.imf.org/?sk=a0867067-d23c-4ebc-ad23-d3b015045405>

International Social Security Association: Social Security country profiles: www.issa.int/en_GB/country-profiles (formerly: Social Security throughout the World, developed jointly with United States Social Security Administration: www.ssa.gov/policy/docs/progdsc/ssptw/)

National Institute of Population and Social Security Research: Japanese Social Security Statistics: www.ipss.go.jp/site-ad/index_english/security-e.html

Organisation for Economic Co-operation and Development: SOCX: www.oecd.org/social/expenditure.htm

United Nations: World Population Prospects: <https://population.un.org/wpp/>

World Bank: Aspire: <http://datatopics.worldbank.org/aspire/>

World Health Organization: National Health Accounts: www.who.int/health-accounts/en/