KHAZAR UNIVERSITY

Faculty: Graduate School of Economics and Business

Department: Economics and Management

Specialty: Financial Management

MASTER THESIS

OPTIMIZING THE EFFICIENCY OF SOCIAL SECURITY FINANCING MECHANISMS IN AZERBAIJAN'S SOCIAL PROTECTION SYSTEM

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December – 2025

XƏZƏR UNİVERSİTETİ

Fakültə: İqtisadiyyat və Biznes Yüksək Təhsil Fakültəsi

Departament: İqtisadiyyat və Menecment

İxtisas: Maliyyə Menecmenti

MAGİSTR DİSSERTASİYA İŞİ

AZƏRBAYCANIN SOSİAL MÜDAFİƏ SİSTEMİNDƏ SOSİAL TƏMİNATIN MALİYYƏLƏŞDİRİLMƏSİ MEXANİZMLƏRİNİN SƏMƏRƏLİLİYİNİN OPTİMALLAŞDIRILMASI

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ABSTRACT

The aim of this dissertation is to analyse the current system of social security financing in the Republic of Azerbaijan and to study how far it ensures financial sustainability, fairness and adequate protection for different groups of the population. The research also examines how key stakeholders and available data reflect the strengths and weaknesses of existing mechanisms in terms of revenue structure, dependence on the state budget, benefit levels and coverage of vulnerable groups. This work contributes in a new way by combining international approaches to social protection financing with detailed country-specific evidence for Azerbaijan and by bringing together economic, legal and institutional perspectives in one study.

I Chapter "Introduction" explains the importance of social security for Azerbaijan's socio-economic development, presents the research problem and existing gaps, sets the aim and main research questions, and defines the object and subject of the study as well as the methods used.

Chapter II "Analysis of the Financing Structure and Functional Performance of Azerbaijan's Social Protection System" describes the institutional setup of the pension and social assistance system, examines the main revenue sources and expenditure patterns, and identifies structural inefficiencies and sustainability risks, including demographic ageing, reliance on oil-related revenues and coverage gaps.

Chapter III "Strategic Approaches to Optimizing the Efficiency of Social Security Financing in Azerbaijan" develops alternative financing tools and diversification options, discusses the application of result-based budgeting and actuarial planning, and puts forward strategic policy proposals to strengthen long-term financial stability and improve the effectiveness of social protection programmes.

Chapter IV "Empirical Assessment and Policy Scenarios for Social Security Financing in Azerbaijan" presents the research design, the dataset and indicators used, the econometric analysis of the relationship between social spending, economic and demographic variables, and evaluates several policy scenarios that show how different reform choices may influence the sustainability and adequacy of the system over time.

Key words: social security, social protection, pension financing, fiscal sustainability, Azerbaijan.

CONTENT

List of acronyms and abbreviations

ADR Age Dependency Ratio
ANOVA Analysis of Variance
AZN Azerbaijani Manat
CPI Consumer Price Index
EU European Union
GDP Gross Domestic Product
HBS Household Budget Survey
IDP Internally Displaced Person
ILO International Labour Organization
IMF International Monetary Fund
ISCED International Standard Classification of Education
MLSPP Ministry of Labour and Social Protection of Population
MoF Ministry of Finance
NDC Notional Defined Contribution
NGO Non-Governmental Organization
OECD Organisation for Economic Co-operation and Development
PAYG Pay-As-You-Go
RBB Result-Based Budgeting
SCSS State Committee on Statistics of the Republic of Azerbaijan
SDG Sustainable Development Goal
SOFAZ State Oil Fund of the Republic of Azerbaijan
SPF Social Protection Floor
SPSS Statistical Package for the Social Sciences
SSPF State Social Protection Fund
TSA Targeted Social Assistance
UN United Nations
WB World Bank

INTRODUCTION

Significance of the study: Social security and social protection are sensitive issues for many governments in the region that have not yet completed the institutional, legal and economic reforms for a fully-fledged market economy and social protection system. Azerbaijan is one of those countries that recently abandoned the Soviet model of social security, and is now trying to build a sustainable and equitable social protection system for its oil-based market economy. Social security financing, in a long-term sustainable and cost-effective way, is not only a technical matter for economists and budget specialists. It is implicitly linked to the living standards of pensioners, people with disabilities, low income households and indeed many other vulnerable groups whose living standards depend upon regular and predictable income streams. Social and political risks are much more severe in systems with particularly weak or unbalanced financing structures, as people lose faith in the state and its promises.

In the last years the pensions, social benefits and the targeted social assistance in Azerbaijan have increased, as a result of the growth of non-oil revenue, as well as the use of reserves formed by oil revenue. There is a trade-off between adequacy in the short term, and macroeconomic and fiscal sustainability in the long term. Relaxed benefit schedules could allow generous pensions to be provided initially, but would become unsustainable in the long term within an ageing population context where the growth in pensioners would outstrip the growth in contributors. It was recognized though that there are gaps within coverage such as for self-employed, informal sector workers and some rural areas where there are neither contributions nor pensions. This means that there are inequities within the system, and it further erodes the system's financial base.

The challenge of finance is not only a matter of magnitude, but also of how resources are raised and used. When social security is massively funded through the state budget and largely generates its revenues from oil, it is susceptible to fluctuations due to oil price volatility and economic downturns. In such moments there is a risk that either benefits will be cut or that public expenditure in other priority areas will be cut to protect social payments, both of which can be painful and destabilizing. Hence the need to develop financing mechanisms that are more diverse, based on more predictable revenue streams, and backed by reserves and financial management expertise.

Making social security financing well-designed can assist the acceleration of inclusive growth more broadly by helping to reduce poverty, enabling consumption smoothing and contributing to household confidence in investing in health, education and small businesses. Poorly designed contribution systems can thereby deter formal employment and raise labour market costs, pushing firms and workers into the informal economy. This interrelationship binds

the financing of social security to the features of labour markets, overall productivity and business environments and ultimately the potential of a country to become a diversified knowledge-based economy. Accordingly, the policy relevance of this analysis extends well beyond income inequality and poverty reduction and points to the challenges of establishing a truly modern social contract in Azerbaijan that is able to build an economy based on both efficiency and social fairness, when considering the fiscal and institutional capacity of the country.

Along with the global debates on social protection floors, universal coverage and sustainable development, the United Nations agencies underline the urgency for countries to bring their social protection system closer to international standards. Azerbaijan, which reinforces its partnership with international and regional actors, is working on reforming its social security financing system to better respond to national priorities and international good practices. This requires a wide-ranging study of the situation, the success already achieved, the risks that can be anticipated in the future and the options of action available. The aim of the study is to fill a gap by providing a country-specific and empirically sound analysis of the priority measures for improving the efficiency of social security financing in Azerbaijan in the medium and long term.

Problem setting and learning level: Numerous papers have been written about the financing of social security in the EU and OECD countries. These frequently discuss pension reform, parametric reforms, multi-pillar strategies, targeted social assistance, and the sustainability of public finances. In practice almost all of these studies are on either advanced economies or on middle-income countries with a high level of institutional capacity, and rarely are specific consideration given to countries where public finances depend heavily on revenues from natural resources, where standard approaches may not be sufficient because of a different macroeconomic and political situation. With regard to Azerbaijan, general features of the social protection system and its reforms are described in helpful reports by international organizations and a small number of local publications. A detailed assessment of the efficiency of financing, the balance of contribution receipts and transfers, the effect of oil revenues, the behavior of contributors and beneficiaries, the quantitative impact of future demographics and economic trends on stability, is lacking.

On the other hand, advanced actuarial models, microsimulation models and detailed household datasets are available and used in most of the international studies to examine the different reform scenarios. However, in the case of Azerbaijan, such models have only been used in closed technical studies (e.g., within individual project reports) that are not available publicly in academic form. As a result, the general academic discussion in Azerbaijan has so

far had very limited access to quantitative analyzes of the different financing strategies. In addition, policy discussions in Azerbaijan often focus on more immediate issues, such as the annual pension indexation or the short-term financial cost of a new social package, rather than on long-term trade-offs; this makes moving from ad-hoc to coherent and longer-term strategy difficult.

As no structured attempts have been made to apply lessons learned from social security financing reform in countries with likewise heterogeneous backgrounds to compare with, such as those from Eastern Europe or some of the new post-Soviet countries that successfully reformed, possible methods to analyze may include diversification of funding sources, binding fiscal rules to pension liabilities, incentives to formalize, and the use of sovereign wealth funds for social purposes. However, these experiences are usually only mentioned in passing in local literature and not compared to institutional context, risk, and potential for adaptation. To support potential adaptation of such experiences to Azerbaijan, there is a need for an analysis to identify models and instruments that would be relevant or problematic.

The learning level of the present research is determined by the above-mentioned gaps. On the one hand, this research must summarize the existing state of knowledge relating to the financing of social security on both a global and a national level and adapt the findings to the situation in Azerbaijan. On the other hand, it needs to move beyond a literature review and provide elements of trend analysis, simple econometric modeling and scenario building on the basis of macroeconomic and social data available. The aim is not only to describe the current state of financing, but to learn about under which conditions the system is likely to be sensitive to demographic, labour market and fiscal developments. The dual role as bridge between theoretical knowledge and practical policy question echoes the problem setting and learning ambition of the thesis.

Purpose and tasks of the study: This study examined social security financing mechanisms of the Republic of Azerbaijan with a view to improving their efficiency, particularly those related to pensions and pension-related social protection mechanisms. It will analyze the key characteristics of social security financing, how the financial flows and provisions are generated and delivered, the strengths and weaknesses of existing mechanisms, and how incentives and reforms could contribute to impressive a balance between benefits adequacy and financial sustainability. The purpose of the study is not only to identify challenges but also to put forward realistic recommendations within institutional, economic and social constraints.

The first of these objectives is to map out the institutional and financial architecture of Azerbaijan's social protection system, including the State Social Protection Fund, budget-

financed assistance programmes, other stakeholders in the system, sources and items of revenue and expenditure over time. The tasks cover: (i) the analysis of overall and main trends of contributions, transfers, benefits, coverage and demographic indicators, and linking them to the main reform measures or economic developments; (ii) the assessment of the performance of the financing system based on the key goals of financial sustainability, adequacy, coverage, administrative efficiency and economic impact; (iii) the analysis and assessment of alternative financing instruments (reserve funds, earmarked taxes or voluntary pillars), and their relevance for the Azeri system. The fifth and final task is to present policy directions and reform options aimed at improving the efficiency and sustainability of social security financing and addressing the medium-term (in the context of the existing institutional framework) and long-term (as part of structural development) challenges.

The object and subject of the research: This research covers the social security financing system in the Republic of Azerbaijan in a broad sense, i.e. the system of legal and institutional regulation of social insurance and social assistance, the flow of funds between the insured, the State Social Protection Fund and the state budget, and the actual reality of contributions and benefits. It also covers the macro-fiscal context in which social security systems operate, especially the role of oil revenues, labour market structure and the main demographic trends relevant to social protection spending.

The study's objective is to analyze the mechanisms, policies and instruments that finance social security in Azerbaijan in terms of their efficiency and sustainability. These mechanisms include contribution rates and bases, budgetary transfers to social funds, the proportional allocation of social expenditure among funds, alternate financial management structures such as the establishment of reserve funds, the earmarking of taxes and supplementary pension schemes. The issue is not whether or not we have social protection, but how it is paid for and how to finance it optimally. The study addresses the interactions between the financial design and the social outcomes of social protection systems, in terms of coverage, adequacy, equity and sustainability, over the long-term.

Used research methods: The analysis of the structure and dynamics of social security financing is carried out both qualitatively and quantitatively. The quantitative part of the analysis is represented by descriptive statistical analysis (of time series data) of social contributions, social expenditures, levels of benefits, and some basic demographic and economic indicators. The data lend themselves to the construction of graphs and tables showing development over time. They also allow for the identification of points when the system underwent major reforms and/or economic crises. Some simple econometric methods such as linear regression models are also applied, to investigate whether the amount of social protection

spending is correlated with the country's GDP per capita or the share of elderly in its population. Here, the objective is to understand how sensitive expenditure needs are to demographic and economic changes.

On the qualitative side, the research examines Azerbaijani national laws, policy documents, government data and academic studies on the social protection system of Azerbaijan and the active reforms. The comparative part of the research analyzes the international experiences shared, with a focus on the various financial models, types of delivery, mechanisms and models which may be relevant to Azerbaijan. The cases are not copied, but serve to think about possible practices. The dissertation also creates a document analysis to investigate how the legal and institutional framework affects the task distribution between the State Social Protection Fund, the Ministry of Finance and others. It is especially important to analyze what is called triangulation, that is to say what quantitative conclusions can be drawn from qualitative information and vice versa. The general aim is to get a better understanding of the financing of social security, and in particular to draw well-argued conclusions on how to increase its efficiency and sustainability.

CHAPTER I. THEORETICAL AND CONCEPTUAL FRAMEWORK OF SOCIAL SECURITY FINANCING

Where to find funds for social protection has been a key issue in research and policy debates. Most countries have tried to strike a balance between the need for social protection and limited resources. The term social protection is often used to include all types of social security. Social protection policies and systems can reduce poverty and vulnerability by providing coverage to social risks such as old age, unemployment, sickness, disability and poverty. Their financing and delivery matter. How can we ensure a social protection system attains its aims while remaining financially viable given rapid changes in demography, an uncertain economic climate, and new social needs? What are the characteristics of welfare financing models? Answers to these questions matter particularly for developing countries like Azerbaijan where social security financing faces the dual challenge of limited resources and rising expectations for social protection programs.

It is well known that social protection has a social and an economic function: social security programs are economic stabilizers and redistributors, reallocating resources from some to vulnerable populations and smoothing consumption over the life cycle [2]. They can prevent people from falling into deprivation during shocks or recessionary periods and thus maintain aggregate demand and social stability. Yet, they may have real consequences on the economy, such as labor market distortion, changes in the savings rate, and distortionary effects on economic efficiency, depending on the method used to fund them (contributory payroll taxes, etc.). [10] The chapter outlines the theoretical framework of the entire volume and describes the chapters covering the economic rationale for and objectives of social protection, financing systems and mechanisms, and various efficiency assessment criteria applied to these mechanisms. Building on a wide range of literature and international evidence, the chapter provides a foundation to the next chapter, which analyzes social protection financing issues in Azerbaijan.

1.1. The economic essence and objectives of social protection systems

Social protection systems respond to certain core economic and social functions and can be defined as the set of instruments that society has made available for risk management and subsistence for all. Most definitions feature risk pooling and consumption smoothing. A group of individuals may face uncertain events (such as illness, unemployment, disability, and old age) that would cause large drops in their income. If the community pools these risks, either through various forms of insurance or through tax-funded programs, income is more evenly distributed in time and across individuals. Without this protection, these risks would either be

impossible to insure, or result in high costs of self-insurance such as precautionary savings or child labor. Thus one of the classical arguments for social insurance is that, in certain cases, insurance markets may not provide an efficient allocation of resources. Two well-known forms of market failure, adverse selection and moral hazard, make purely private insurance incomplete or prohibitively expensive with respect to unemployment, longevity, and other risks. Despite the problems with private market provision, publicly organized social insurance can cover just about all people and pool risks across large numbers on a sustainable basis [23]. Through this means, social protection also contributes to a more productive and efficient economy, by preventing extreme poverty from weakening investments made in the human capital and productivity of present and future generations.

Social protection systems have multiple objectives. These include poverty alleviation, income redistribution, social cohesion, human capital development and, more broadly, the fulfillment of its core function, which is to alleviate poverty and material deprivation [3]. Regular cash transfers or social pensions, for example, are direct income transfers which increase the income of the poor and lift many out of poverty. In many cases, social protection has been viewed as "one of the most effective tools for poverty reduction", and there is evidence that well designed transfers can reduce poverty [16]. Second, an important goal of social protection is to reduce inequality by redistributing resources from people with higher incomes to people with lower incomes (or, in other words, by providing a relatively larger benefit to people with lower incomes). This need not be done in an explicit manner (e.g. through progressive tax-financing of benefits), but can be done implicitly, for example through social insurance with flat or minimum pensions [23]. As welfare states are to a large extent based on principles of social justice and solidarity, that is, the idea that society is obliged to provide for all its members an acceptable standard of living independently of their success and failure in free markets, equality is an obvious aim.

One of these goals is to ensure income security throughout the life cycle. This results in social protection schemes which cover pensions, disability, unemployment, health insurance and family benefits. Each of these schemes covers a set of living conditions of people at a given stage, and is meant to protect people when events take place that may make them poor and at risk of poverty, such as reaching pensionable age or facing a health-related shock [6]. They also allow stable consumption of the individual over their life cycle, such as in the case of pensions where individuals consume in old age the amount they had amassed previously through contributions or taxes. This avoids large drops in utility at retirement [2]. Unemployment insurance allows unemployed people to maintain some purchasing power while they search for new jobs, thus protecting the unemployed. In times of recession, unemployment insurance also

acts as an automatic stabilizer, providing demand when private sector demand is insufficient [3]. Therefore, social security objectives are closely linked with macroeconomic stabilization objectives.

Investments in human capital and economic development are also an increasing goal of social protection. A growing focus of social protection discussions is the "promotive" and "transformative" role of protection beyond its safety net functions. Conditional cash transfers, for example, that are conditional upon school attendance or health check-ups for children improve the accumulation of human capital for the poor. By reducing the cost of schooling and health, these programs can improve long-term productivity and growth. Thus social protection can be viewed not only as a social right, but also as a productive investment in a healthier, better educated, and higher productivity labor force [31]. Examples include social insurance for health (i.e. universal health coverage), which improves health status and labor productivity and has a positive economic payoff. Furthermore, with these systems' safety net feature they may also allow for higher levels of entrepreneurial risk-taking or acceptance of economic restructuring (through redundancy protection or retraining support), thus promoting economic dynamism. [16]

Another objective of redistribution is social and political stability. Societies that have high inequality and no cushions for the poor are likely to experience social unrest. Social protection programs in the form of either contributory social insurance or tax-funded social assistance can strengthen the social contract between the citizenry and the state. Unemployment benefit or poverty-targeted support during economic crises can contribute to social stability and a political plan of action. Historically, social security schemes such as those pioneered in the late 19th century by Bismarck in the form of old-age pensions and health insurance have served to embed the working population in an existing order and to render radical movements less appealing [32]. Social solidarity is a goal of social protection. This means that all sections of the population (the elderly, disabled, the poor, the unemployed, etc) are included in the development process, thereby building solidarity and citizenship. It should be noted that social protection is considered part of reaching the SDGs, for example, the poverty and inequality SDGs, and that all countries should implement nationally appropriate social protection systems for all (SDG 1.3) [20].

The relative importance of these objectives varies, but there is a consensus for the three overarching objectives of social protection, which the different institutions working on social protection define slightly differently. The World Bank describes social protection objectives as "resilience, equity, and opportunity" (safety nets, poverty/inequality reduction, and investment in people, respectively) [30]. A universal goal of social security is to help ensure the right to

social protection for all workers and their dependents through universal coverage and adequate benefits (International Labour Organization, ILO). In this respect, the welfare states in Europe and the safety net systems in the developing world have much in common: protecting against destitution, reducing inequality, and increasing productive participation [4].

The functions of social protection can be classified in many ways. A commonly used framework, developed by Devereux and Sabates-Wheeler, identifies four functions: protective, preventive, promotive and transformative [11]. These are summarized in Table 1.1.1 below.

Table 1.1.1. Functions of social protection (the "4P" framework)

Function	Description	Examples of measures
Protective	It provides a safety net to protect the poorest and those in urgent need; responds to chronic poverty and destitution.	These included transferring cash to the poorest households, helping with emergency food and pensioning the elderly poor.
Preventive	It protects people from shocks and destitution by supporting their risk management and protecting them from livelihood risks and the loss of income.	Social insurance and maternity leave (provide pensions, address unemployment, ensure health); insure crops or against the weather.
Promotive	Improves incomes and capabilities, and creates opportunities and livelihoods that help people escape from poverty. Usually seen as part of human capital development and asset provision.	Such programs transfer conditional cash for school attendance or health checkups. They may also include public works programs like cash for work, or subsidies for skills training.
Transformative	It addresses discrimination and social exclusion well beyond poverty, such as where discrimination or lack of rights and voice affect marginalized groups or individuals.	Legal rights like labor rights or land rights for women, social funds to the poorest, anti-discrimination laws.

Source: Adapted from Devereux & Sabates-Wheeler (2004) and Midgley (2012) conceptualizations.

As Table 1.1.1 shows, the different functions of social protection range from reducing poverty in the short term to empowerment in the long term. In the earliest days of welfare, the protective function was paramount. Early poor relief (or social assistance) was to provide, at a minimum, the means for survival to the poor. This function has been replaced, at least to some extent, with the concept of social insurance, or programs that prevent individuals from falling into poverty as a result of a life cycle event (e.g. unemployment insurance preventing a temporary layoff from resulting in a permanent reduction in income). Promotive schemes, in particular, have received increasing attention from development policymakers in recent years,

due to the hypothesis that social protection helps to break inter-generational poverty as it allows poor households to invest in health and education. The transformative function relies on the fact that poverty can only be tackled by addressing underlying causes such as gender discrimination or social discrimination, and links social protection to other social policies [31]. In practice, social protection systems often include overlapping functions, such as: a cash transfer can be protective (providing an increased income), preventive (helping protect those unable to liquidate their assets), promotive (such as enabling children to continue their education), and transformative (for example, targeting marginalized groups that have been historically excluded). Little wonder that achieving all these aims is costly. Social protection is one of the largest areas of public expenditure, with many governments devoting a high share of GDP to it. Public social protection expenditure (pensions, health, unemployment benefits, child benefits, etc.) as a share of GDP in high-income countries is between 15 and 20%, indicating a well-developed welfare system [20]. In contrast, public social safety nets as percentage of GDP in low-income countries is at 1 to 2% of GDP, although these safety nets are often of very low adequacy and coverage [20]. These inequities also exist at the global level, and are the kind of inequities the SDGs respond to. According to the ILO's World Social Protection Report, only 46.9% of the global population are effectively covered by social protection systems, which means over 4 billion people lack any social protection coverage [20]. These unprotected billions, concentrated in the developing world, have little or no social protection, reserved instead for people in the formal sector (which is typically a small minority), and they are one shock away from poverty.

Table 1.1.2 shows coverage and expenditure levels of social protection across different levels of national income and shows the global divide in social protection coverage.

Table 1.1.2. Social protection spending and coverage by country income level

Country Income Group	Public Social Protection Expenditure (% of GDP, excl. health)	Population covered by at least one social benefit (%)
High-income countries	14–18% of GDP (extensive systems)	80–90% covered (near-universal coverage)
Upper-middle-income	6–8% of GDP (expanding systems)	60% covered (moderate coverage; many formal workers)
Lower-middle-income	3–5% of GDP (growing effort)	40% covered (large gaps, especially in informal sector)
Low-income countries	1–2% of GDP (limited programs)	10–20% covered (majority of population with no coverage)

Source: Compiled from ILO World Social Protection Report (2021) data on regional/income group averages.

Table 1.1.2, which shows that high-income welfare states spend a larger share of their national income on social protection, provides further evidence for this hypothesis. Coverage of social protection in these countries is universal: practically all seniors receive pensions and the huge majority of the population has access to health and unemployment benefits. In upper-middle-income countries across Eastern Europe, East Asia and Latin America, coverage of social protection is lower and the share of GDP spent on social protection has been increasing. The proportion of the population covered is also smaller, through a patchwork of contributory and expanding tax-financed targeted programs for the poor [20]. Many lower-middle-income countries (e.g. the majority of South Asia, Sub-Saharan Africa) also have limited social protection, covering only formal sector employees and some poor households. These do not include informal economy workers or the "missing middle" of workers employed in small and medium-sized enterprises. Low income countries tend to have the least fiscal space, and the least administrative capacity, for social protection. As more than 80% of their populations may not have any social security coverage [25], international support is needed for expanding coverage, and national reforms are needed. According to ILO estimates, low-income countries would need to spend on average an additional 5 to 6% of GDP to provide a basic social protection floor for all. [19] The financing gap is important in the debate over what financing options are most appropriate to help fill the gap (e.g., tax reform, budget reallocations, or foreign development assistance), which are discussed in the next section of this chapter.

Furthermore, the economics literature long observed that economic development is correlated with more wide-ranging systems of social protection and spending [3]. For most countries, industrialization and the formalization of a wage-level economy provided an initial basis for contributory social insurance schemes (based on systematic contributions by formal workers and employers). In established democracies, demand from voters for social insurance has meant that less developed countries have followed suit with pension, health, and unemployment insurance policy. For instance, Europe has experienced an important growth in social protection since the mid-20th century, alongside growth of the economy, suggesting that the two are mutually reinforcing policies. In the short run social protection supports growth by building human capital and encouraging structural economic change (through more productive workers and a healthier society); in turn, growth enables social protection. This can create a so-called "virtuous cycle"; inclusive social policy drives growth, and growth allows for more inclusive policies to be put in place [23].

Overall, social protection can be understood as an economic form of collective risk management and redistribution of wealth within society according to the principles of solidarity

and social justice, while also contributing to poverty alleviation and long-term socio-economic transformation. Because achieving these goals requires substantial public spending to be accompanied by sound policy choices, a key question will be how to finance social protection systems in a way that is effective and equitable. With a better understanding of the rationale and the goals of social protection systems, we can now explore how they are organized and financed around the world. As such, this will provide the necessary context for an analysis of social protection financing in Azerbaijan by outlining models and mechanisms, including differences between the customary welfare state and a diversified social protection system seen in emerging markets.

1.2. Models and mechanisms of social security financing: global practices and approaches

Internationally, countries have adopted different models of social security systems, with the final systems resulting from a mixture of history, politics and the economy. Social security systems can be categorized into two ideal types, the Bismarckian (social insurance) and Beveridgean (universal) models. The models are named after the political economists who were responsible for designing the early welfare states in Germany and the United Kingdom, respectively. They are ideal types of how social services can be financed and provided, although in practice almost all systems combine them [10]. These can provide useful starting points for analysis [21]. Table 1.2.1 compares the main features of the Bismarck model and Beveridge model:

Table 1.2.1. Bismarck vs. Beveridge social security models – a comparison

Characteristic	Bismarck Model (Social Insurance)	Beveridge Model (Universal/National Welfare)
Financing basis	Social insurance contributions made by employees and employers, usually as a percentage of earnings, usually to specially designated funds.	General tax revenue (taxes from the government budget). Includes flat rate contributions (e.g. social insurance tax), but mostly financed by tax revenues.
Coverage	Scope covers workers in the formal sector and their dependents (contributing workers); the initial schemes were occupational or sectoral.	Universal. Nondiscriminatory. All residents/citizens, regardless of employment. Resident is entitled to health services by virtue of residency/citizenship, not contributions.
Benefit structure	Benefits often related to persons' previous earnings (contributory principle): pensions proportional to previous income and	Most benefits are flat-rate (universal or non-contributory), means-tested and intended to provide a basic standard of living rather than seek to

	contributions. This seeks to maintain the income level.	replace preretirement consumption (e.g. a flat pension for the whole population).
Redistribution	Little explicit redistribution across income groups (benefits reflect contributions). Predominantly within-lifetime redistribution (over the high-earnings years' to retirement), although notionally financed by younger generations. Solidarity is typically among insured groups (workers).	important redistribution from rich to poor (tax-financed benefits can be funded by progressive taxation), and redistribution across life phases, with a strong element of vertical equity (rich pay more than they get).
Administration	Commonly handled by quasi-public insurance funds or social security institutions (to which employers, unions, and pensioners might contribute), typically with multiple funds for separate programs (pension fund, health insurance fund).	Usually a single government department (like the Ministry of Social Protection or the National Health Service). It is possible that broad programs are housed in one organization given the universal coverage.
Examples (classic)	Germany, France and Austria (customary Continental European systems) have also adopted the principle, as have many emerging markets (at least for formal workers).	UK post war welfare state as envisaged by Beveridge Report; Nordic countries developed largely universal or near universal systems, albeit with high rates of taxation; New Zealand's flat pension is a Beveridge-type model.
Key goal	The insurance principle requires that the contributors are paid for the lost income in proportion to their contributions. Social insurance refers to earned entitlement.	Solidarity principle - ensuring an income floor and access to services for everyone, as a right, funded on a shared basis (solidarity, taxes), for universal rights and preventing poverty.

Source: Adapted from social policy literature [10; 21].

From Table 1.2.1, we see that the Bismarck model is a contributory system. Health insurance (1883), accident insurance (1884), and old-age pensions (1889) were introduced to the German working population in the late 19th century by Chancellor Otto von Bismarck [10]. The reason for these measures was not only a fear of uncontrolled social agitation and socialism, but also the realization that contributions from the worker would bind him to the state, a conservative innovation that nevertheless led to the social security systems of today [32]. In particular, in Bismarckian systems, employment is linked to social security, and contributions to unemployment insurance and pensions are mandated. Funded schemes are often financed by employer and employee payroll taxes, which in many Continental European countries contribute a combined 20-40% of wages to five insurances. This has the important consequence

that the burden of financing social insurance is concentrated on labor income. If rates are introduced at a high level, there is the potential risk of high labor costs, and a negative impact on employment or informality [21]. To the extent that pensions vary with earnings, so that wealthier people contribute more, they also benefit according to the "insurance" logic rather than the "needs" logic. However, a Bismarckian system will usually have some aspects of redistribution, such as minimum pensions, child care credits, and contribution ceilings, which make it somewhat progressive. However, the major area of redistribution in a pure Bismarckian system is between one's own life, specifically from when you are young and working to when you are old and retired. This is in contrast to the way redistribution usually occurs, from the rich to the poor at a point in time [10].

The Beveridge model, as opposed to the Bismarck model, was named after William Beveridge, who published the famous British Beveridge Report of 1942. The report proposed a national system of social insurance, whereby flat-rate benefits would be paid to everybody in need, financed out of general taxation. Universal coverage and uniform benefits is the hallmark of this model, seeking to achieve a guaranteed minimum standard of living to all people. The UK National Health Service, established in 1948, is one example of a Beveridgean healthcare system. The service is funded via taxes and is made available to all people, free at the point of care. Likewise, the early post-war UK pension was a flat, non-contributory scheme to prevent poverty in old age, not to replicate earnings. In such a case, pensions are financed mainly out of general taxation, including income taxes, VAT, etc., rather than by earmarked payroll taxes or forced savings. [13] This spreads the costs of the system through capital income and consumption depending on what is decided in the tax system. A Beveridge-type system is characterized by more vertical redistribution, because everyone pays according to their means (under a progressive income tax system) and receives a minimum benefit [2]. An advantage of universal systems is that they are particularly good at creating a high level of social protection, even though they may not produce a very high level of earnings replacement. Flat pensions, in particular, are low relative to preretirement earnings, which is why most universal systems provide occupational pensions or private pensions in addition.

In practice, few countries today are operating on strict lines, and most fall somewhere between the two systems: Further convergence was achieved by Bismarckian countries introducing more tax-financed or flat-rate benefits and Beveridgean countries introducing more contributory elements or earnings-related supplements. Other countries started with a Bismarckian social insurance model, but have since introduced tax-financed solidarity pensions (minimum old-age benefits) too, including France which also finances family benefits and part of healthcare from taxes. The United Kingdom also introduced a second earnings-related tier

(the State Second Pension) on top of its flat rate pension, built up over several decades. However, the flat rate pension has recently been reformed back to being a single tier with a higher flat rate. The Nordic countries (e.g. Sweden, Denmark, Norway) are often regarded as a separate 'social democratic' welfare model. Regarding finances, the Nordic or Scandinavian model is closer to Beveridge (tax funded, universal benefits) but also has earnings-related benefits (especially pensions). Some countries have paid for very generous benefits with heavy taxation on all citizens, which reflects even more strongly the principle of solidarity [12]. The US is interesting. It has a contributory Social Security pension system (for formal workers) resembling a Bismarckian system (benefit levels are based on earnings, even if on a mildly progressive level). It lacked universal health care (but this has changed in more recent years). It has targeted transfers to the poorest. (e.g. the Supplemental Security Income program). The US is a "liberal" welfare regime, meaning that state welfare is more residual. The state provides mainly in cases of failure and with market or family provision otherwise [12]. Accordingly, the US has low public spending and high private risk-pooling (occupational pensions, private health care). Thus US welfare appears to be neither Bismarckian nor Beveridgean, but to rely instead on a different form of welfare financing (private financing and means-testing).

Besides those models, many middle-income and poor countries created initial social security schemes only for formal sector employees (inherited from colonial times or at the start of industrialization) and have in recent decades moved to expand social protection coverage to informal and poor people by grafting the Beveridge-like floor onto a Bismarck trunk. Brazil, South Africa, and Georgia, for example, introduced universal noncontributory pensions for the elderly poor, financed through general revenues, to cover people left out of the contributory pension schemes [3]. So have many countries in Asia and Africa also set up cash transfer programs (child grants, poverty-targeted transfers) financed by taxation or donor assistance to give some coverage to the unprotected, informal workforce [25]. In most developing countries, then, the resulting system has been a mix of contributory social insurance for those who can afford it, plus tax-financed social assistance to those who cannot. Middle-income Latin American countries previously had Bismarckian pensions and healthcare for formal workers. In the 1990s and 2000s, most added or expanded Beveridgean components of social pensions and conditional cash transfers for informal workers and the very poor [22]. In low income countries, the tax-financed components of the pension system are the Beveridgean part simply because the formal economy is small enough that contributory elements are limited.

Though other sources and modalities of financing social security systems beyond the Bismarck/Beveridge dichotomy are possible, Table 1.2.2 below presents the most common financing mechanisms for social security systems across the world:

Table 1.2.2. Main financing methods of social security systems

Mechanism	Description	Examples
Payroll contributions	Mandatory contributions from employers and employees based on wages.	Germany and Azerbaijan offer pensions and unemployment insurance approximately 18-20% of wages.
General tax revenue	National tax budget, with no earmarking.	UK NHS, social pensions within Mauritius, Scandinavian universal benefits
Mandatory savings	Individual accounts with mandatory contributions, to be drawn later.	Singapore's CPF, Chilean pension reform (1981).
Donor/external aid	International assistance or grants for social safety nets.	For Sub-Saharan Africa, see World Bank, UNICEF.
Earmarked non-payroll taxes	Social funds financed by income/consumption based levies.	France's CSG tax and social value-added tax [10].
Investment returns/reserves	Return on invested surplus of social funds or sovereign wealth assets.	Investments by Norway's Government Pension Fund, a national insurance reserve.
Private premiums (voluntary)	Social protection supplements provided with private funding.	Swiss private health insurance, US/Germany occupational pensions.

Source: Author's elaboration based on international social protection financing practices [2; 9; 10; 30].

Table 1.2.2 shows payroll contributions and general taxes are by far the dominant financing method for public social security systems, although their relative importance varies between countries and schemes. Contributory pensions or unemployment insurance systems are usually payroll tax financed in many countries (social insurance). In contrast, non-contributory poverty-targeted means-tested benefits tend to be financed from general revenue. This also extends to health systems, which are either financed by social health insurance, and where employees and employers pay, as in Germany or Japan, or by tax- funded national health services, as in UK or Canada. In practice, however, most countries have a mixed system; for example, France raises health care funds from a tax on wages and broad-based taxes.

Regarding funding, social insurance systems can be fund based or on a Pay-As-You-Go (PAYG) basis. In a PAYG system, contributions made today by workers and employers are used to pay the benefits of retirees or other claimants today. This is a term for any type of intergenerational or intragenerational redistributive finance scheme. Most pension systems worldwide are PAYG systems, in which the population of workers supports the retired population. The major advantages of such a scheme are that it does not need to amass large

reserves and that it responds quickly to changes in wage levels, etc. However the main disadvantage is that if the ratio of workers to retirees falls (as in an aging population), then the scheme can suffer serious sustainability problems. A funded scheme amasses contributions in a fund and the benefits come from the fund. Such systems are closer to private pensions or provident funds. Funded systems may be seen as more sustainable in the face of aging (since each generation largely finances itself by saving), but they are exposed to investment risk and are generally more complex to manage [17]. In most countries, the public basic pension is pay-as-you-go, but additional pension is funded. Since the 1990s, many countries (e.g. Chile, Kazakhstan and the countries of Eastern Europe) that introduced optional or mandatory funded pension systems so as to reduce future public spending are reversing this process, with degrees of success [2].

Another typology of welfare states, besides looking at welfare state finance, is to classify them into the categories liberal, conservative (or corporatist), and social democratic welfare regimes, as associated with Gøsta Esping-Andersen [12]. In financing terms:

• In the liberal regime (e.g. USA, Australia), modest benefits (often tax-funded but means tested) are paid, but private provision is encouraged. Total social expenditure (public + private) may be high by international standards, but public expenditure is, in contrast, lower than in the coordinated and social democratic regimes. Financing may be selective and funded by general taxation.

• The conservative/corporatist system (Germany, France, Austria, Switzerland, Italy) is Bismarckian. It is based on contributory payroll taxes that depend on employment; the state supplements it by subsidizing, for example, farmers' pensions or providing a minimum benefit. It is typically fragmented, containing schemes for different occupational groups.

• The social democratic regime, such as Sweden and Denmark, combines universal social rights funded through high taxes with a level of earnings-related benefits, and is distinguished by a prominent role for the state in both financing and delivering the goods. Although payroll taxes may play a minor role, such as in Sweden, where a payroll tax covers the earnings-related component of pensions.

• A fourth category that is often referenced in the literature is the informal security or developing regime salient in lower-income countries. Here, cash benefit coverage is stated to be limited to informal social protection networks, public provision at very low levels, private insurance, family, friends, and informal transfers through whatever programs are present [3]. In this context, external assistance is sometimes a relevant source of funding for social protection pilot and program implementation.

Other countries have also engaged in policy transfer and reform, with the multi-pillar system proposed by the World Bank acting as model for old-age social security. The three-pillar model usually proposes a zero pillar (non-contributory, tax-financed basic pension above the poverty line in old age), a first pillar (mandatory PAYG public pension typically to replace income, financed by contributions), a second pillar (mandatory individual savings, possibly with some guarantees, financed by funding), and a third pillar (voluntary private pensions). The three-pillar structure has since been implemented in most other countries in this broad form as well. To alleviate fiscal pressures on PAYG first pillar programs, many countries in Latin America and Eastern Europe introduced mandatory funded second pillars (private accounts) in the 1990s, although some of these countries have since partially reversed or otherwise reformed these systems to address fiscal and coverage concerns [2]. After social and financial crises of the 2000s and 2010s, stress is again placed on basic universal or minimum guarantees (the zero pillar), because contributory systems alone are unable to cover everyone [25]. For example, in the last decade, China and Thailand have introduced near universal pensions funded from taxes to the elderly, people that are not covered by contribution based pension schemes in the rural areas and the informal sector [30].

Azerbaijan's social protection funding system combines these global themes, having inherited a state and enterprise funded social security system from the Soviet period with a high contributory element via payroll taxes, which was nonetheless supported by the state. Azerbaijan inherited a Bismarckian social insurance fund for pensions and short-term benefits, financed by employer and employee contributions, as well a small social assistance system financed from the budget [5]. Thanks to recent oil revenues, the government has increased budgetary transfers to the State Social Protection Fund to cushion pensions and, more recently, to finance categorical and targeted social assistance [6]. As in many transition economies, the social security system in Azerbaijan is financed by a mixture of a payroll tax (state social insurance contribution) of some 25% covering the bulk of the pension system, augmented by substantial general revenue financing (including oil fund revenues) to cover deficits and non-contributory benefits [5]. Hence, the system is moving from being a pure Bismarck model to a more hybrid model, in the sense of recognizing the need for a Beveridge-style supporting (universal or targeted support for those not reached by insurance). Internationally, as levels of self-employment or informal work increase, coverage gaps emerge from modes of financing that are purely contributory, and tax-financed social assistance schemes or subsidies are used to fill them [3].

International evidence also shows trade-offs between financing modes. High payroll tax rates that are not well enforced can lead firms and employees to prefer informal work that avoids

remitting these taxes [21]. For some countries in Europe and LatAm this led to payroll tax rates being lowered and a greater proportion of the benefit costs being spread across the tax base (redistributing the costs). For example, in France, the general tax for social security - CSG (Contribution sociale généralisée), a broad-based income tax, was introduced at least in part to reduce the burden on labor [10]. Denmark switched long ago to financing unemployment/disability benefits by taxes (with a small employee contribution). This presumably helps with keeping employment high, with no necessity for high payroll taxes. On the other hand, social security financed from general revenues binds these benefits to the financial situation of the country and its politics. Social programs also experience competition from infrastructure, defense spending, and other public expenditures, and are sometimes cut when tax revenues fall. Contributory financing has the advantage that it is earmarked tax spending that cannot be easily redirected. Countries sometimes establish a social insurance fund or trust fund that will ring-fence contributions so they will not be used for other purposes [9]. The U.S. Social Security Trust Fund, for instance, matures surplus payroll taxes and invests them in government bonds, providing a temporary buffer for the future retiree bulge (but ultimately relying on the government's ability to redeem the bonds) [17].

More often, particularly in low-income countries, social protection is supported by a focus on affordability or through innovations in financing. For example, natural resource proceeds or 'sin taxes' on tobacco, alcohol, or gambling have been set aside to fund social protection when tax capacities are deficient. For example, in Mongolia, tax revenues from mining are used to fund a universal child grant (which was made targeted when mining revenues fell); in some Latin American countries, social pensions or child grants have been funded from general tax revenues, which have been top-up funded via value-added tax (VAT), which is regressive but administratively easier to collect than income tax [15]. There is also discussion of using new taxes (e.g. carbon taxes) to fund social protection, linking social and environmental objectives [25].

In summary, social security financing practices are diverse, but they can be grouped into a limited number of different models: contributory vs. non-contributory funding, PAYG vs. funded arrangements. Public social expenditure is high in many advanced economies, and is typically funded by payroll taxes and general taxes, reflecting decades of expansion and layering of different programs. Many emerging economies are experimenting with expanding tax-financed floors together with a contributory pillar for those that can afford it. There is no one-size-fits-all solution, however, as the configuration of their social systems, as well as their objectives, vary from country to country. The key, as seen in the literature, is about the efficiency and sustainability of financing. This leads us to the final sub-topic: how do we assess

whether a particular financing arrangement or model is efficient in meeting its objectives? This will be the topic of the next section, describing the criteria or characteristics that can be used to evaluate the performance of social security financing systems.

1.3. Criteria for evaluating the efficiency of social security financing mechanisms

Since social protection involves a large share of public expenditure the first question is whether it is used efficiently and effectively. Efficiency in social security financing means that resources that are limited are spent in the best way to achieve social policy objectives. A financing mechanism is efficient if it achieves a desired impact (such as poverty alleviation, income security, coverage) at the lowest cost and in a sustainable manner [9]. More generally, it is defined as the financial sustainability, cost-effectiveness, administrative efficiency, and lack of unintended economic distortion or leakage of the financing mechanism being used to achieve the desired impact. A number of benchmarks for assessing the performance of social security financing arrangements meeting the criteria specified above have been developed in the literature, and from experience in other countries. These benchmarks are described briefly in Table 1.3.1 below and discussed further below.

Table 1.3.1. Key evaluation criteria for social security financing mechanisms

Criterion	Description	Key Indicators
Financial sustainability	Ability to meet obligations long-term without fiscal stress.	Actuarial balance, system dependency ratio, funding gap (% of GDP).
Adequacy of benefits	Whether benefits meet poverty reduction or income replacement goals.	Replacement rate, benefits vs. poverty line, poverty gap reduction.
Coverage and inclusion	Extent to which target groups are reached.	Coverage rates, inclusion/exclusion errors, share of informal sector covered.
Cost-effectiveness	Social impact per currency unit spent.	Reduction in poverty gap/Gini /% of GDP; poorest share of benefits.
Administrative efficiency	Ratio of admin costs to delivered benefits.	Admin cost ratio, processing time, fraud/error leakage.
Economic efficiency	Avoidance of labor and market distortions.	Labor taxes, probability of avoiding contributions, impact of funding methods.

Source: Author's synthesis based on evaluation frameworks [9; 13; 24].

Table 1.3.1 provides a framework by which we can evaluate a financing mechanism from several perspectives. Let us examine these criteria in further detail:

• Financial sustainability: the system is not expected to require unsustainable levels of additional funding. For example, in the case of a pay-as-you-go pension system, projected future revenues from contributions (based on the projected size of the future workforce and wage levels) will be sufficient to pay pensions. Schemes that have large subsidies from the state budget and are chronically in deficit are considered to be financially distressed. Many countries prepare 30 or 50-year actuarial projections of social insurance funds to analyze their fund sustainability [2]. If a projection indicates that the fund will be depleted and deficits will explode as the population ages, the system is not sustainable. A simple indicator of sustainability is the system dependency ratio (e.g., if there are two contributors for each pensioner now, but only one contributor for each pensioner in several decades, then either contribution rates must be raised or benefits must be reduced). A second issue is fiscal sustainability. Parametric reforms (changes to the retirement age or benefit formula) are necessary if countries like Azerbaijan are going to afford pensions as fertility rates decline and longevity increases. If social expenditures are mostly government revenue funded, a government has to be able to afford it even in times of economic slowdown and/or lower commodity prices, important for Azerbaijan reliant on oil revenues. Systems based heavily on volatile revenue sources may be efficient in good times and unsustainable in bad times. It is typical for an efficient financing mechanism to contain an internal smoothening mechanism (e.g., building a pension fund reserve during the demographic dividend to be drawn during old age) [17].

• Benefit adequacy: There is little point in a "sustainable" financing mechanism if the level of benefits provided is insufficient to meet needs. Thus, efficiency must also be balanced with effectiveness, or the protection achieved must be meaningful. It is often assessed as a replacement rate (for pensions, the ILO might consider a system adequate if it replaced at least 40 percent of the average worker's pre-pension wage) or as being above a poverty line (for social assistance, if the transfer is sufficient to lift a household over the extreme poverty line). In cases where external conditions lead to benefits erosion (high inflation with no indexation, or a budget that freezes benefits), the system may be financially efficient (low cost) but a failure socially [3]. One question, for example, would be how has poverty among the elderly changed before and after pensions were introduced? If a high percentage of the elderly remain in poverty after pensions and other benefits, then the sustainability of the financing needs to be re-examined [13]. To strengthen adequacy, countries such as the UK regularly review the adequacy of benefits and have introduced pension credits to bring income above the poverty line, even for those with a small contribution to the scheme [16]. Therefore, adequacy is likely to be a

central pillar of measuring performance, to be achieved in concert with sustainability (Grech A. G, 2018).

• Coverage and inclusion: The efficiency of a financing mechanism may be compromised if a large portion of the population is left outside the system. In a largely informal economy, a purely contributory system is likely to cover most formal sector workers while leaving most of the population outside the financing mechanism. The question of whether it is efficient therefore becomes one of whether or not the mechanism is well designed to extend coverage; if not, it would only be serving a privileged segment of the community and from a social viewpoint not a wise use of public resources [3]. Coverage statistics are tracked in detail. In the member states of the European Union, coverage is over 95% among employed workers by some form of social insurance. In South Asia or Sub-Saharan Africa, for example, coverage may only reach 10-20% of the labor force [20]. Extending coverage may be done cost-effectively, for example, by subsidizing contributions for informal or self-employed workers or financing the social protection floor through taxation for those not covered by social insurance. One such attempt is the universalization of social protection. That is, social protection in all its forms is extended to the entire workforce, covering 100% of the population at least for a minimum set of guarantees [25]. This includes systems that have a plan, including a financing plan, to move towards universality. Further, systems with coverage and financing mechanisms that are too narrowly defined (e.g. payroll-financed schemes that leave informal workers out of the picture) are said to generate inefficiencies, as they cannot adapt to developments in the labor market. This is also the case with large inclusion and exclusion errors. High inclusion error implies a large share of benefits goes to ineligible individuals causing the program to suffer from large leakage, while high exclusion error means many eligible individuals do not receive benefits. Often, however, poverty-targeted programs can be poorly managed such that many of the non-poor also are included, thus wasting program funds. Likewise, high exclusion means not reaching the target group with program financing and delivery, thus lowering the value of each dollar spent [15].

• Cost-effectiveness (poverty/impact efficiency): The cost-effectiveness criterion seeks to provide a value of the impact relative to the costs. The poverty-reducing efficiency of social transfers is one of the measures commonly used in OECD and EU analyzes [8]. This is usually computed as the total change in the poverty gap (total reduction in poverty shortfall) over total transfer outlays. Programs that generate a large ratio can be said to be well targeted among the poor and to have a large poverty impact per dollar spent. For pooled data across all European countries, an additional social transfer of one percentage point of GDP is estimated to decrease relative poverty rate by 0.7 percentage points on average. but in some countries this effect is

larger than 1 percentage point (indicating relatively well-targeted and adequate social transfers) while in others it is less than 0.3 percentage points (indicating inefficient social transfer systems). One study finds the most efficient countries in terms of relative poverty reduction are Ireland and the Nordic Countries, while the least efficient are the Southern European countries such as Italy or Greece. This would mean that, for the latter, perhaps benefits might be going more to non-poor (like generous pensions to middle-class) while not covering the very poor adequately, resulting in lower impact efficiency. In developing country contexts, cost-effectiveness is most often treated in terms of what proportion of benefits go to the poorest 20% or 10%. In other words, a targeted cash transfer will have between 60 and 80 percent of its benefits accruing to the bottom quintile, compared to less than 20 percent for an untargeted subsidy such as fuel. Therefore, better targeting is considered helpful in making cash transfers more impactful against poverty. Nevertheless, targeted programs can be more costly to administer and can have targeting errors. Thus, efficiency depends not just on the degree of targeting but also on the nature of targeting. It also depends on whether the transfers are behaviorally effective. Conditional cash transfers occasionally appear to be more efficient in terms of increased school enrolment per dollar than untied transfers (conditional cash transfers create incentives for more desirable outcomes); however, they are also more complex to administer [3].

Consider two countries An and B, that spend 5% of GDP on social transfers. For A, the poverty headcount falls from 30% to 15%. This is a 15 point reduction or 15% of the poverty headcount. Country B's spending reduces the poverty headcount from 30% to 25% (a 5-point reduction). It is obvious that the spending in country A is much more efficient. But much of this efficiency is also driven by the flexibility in how that spending is targeted. For example, A could implement a well-targeted basic income for all, whereas B could spend on generous pensions for already relatively secure groups. Certainly, in the EU, there is evidence that some countries reduce poverty more than twice as much as other countries with similar social expenditure [7], calling for a rethink of the incidence and finance of these systems in less efficient countries.

• Administrative efficiency. This criterion has to do with the internal cost of running the system. A social security scheme must have a bureaucracy, to collect taxes or contributions, keep records, check entitlement and pay benefits. One objective must certainly be to keep the ratio between the running cost of the system and its output within acceptable limits. High administrative costs also mean that more people do not benefit, and can mean red tape, duplication of agencies, and corruption/fraud. If an unemployment insurance scheme spends 15 cents of every dollar on administration, it may be considered to be inefficient if other countries can provide similar services for 5 cents. Reducing and automating procedures whenever

possible, especially by using modern information technology, can make a scheme much less expensive. Some of the most administratively efficient schemes are those which are the most simple and universal. For example, a universal pension for those above a certain age could be administered without much additional bureaucracy for means testing, possibly using the same payment mechanism that already exists [27]. On the other hand, a scheme which requires frequent recertification and administering complex surveys of households can be more costly to administer. There is thus a tradeoff between precision and cost, and so the program's administrative efficiency requires vigilance against fraud and error. In some of the largest systems, a few percentage points of payments might be lost because of errors or fraudulent claims. A good monitoring and audit system can make a system more efficient by recapturing this money and preventing future misuse of its funds. Another consideration is the administrative complexity that may be involved in the financing mechanism, which leads to important inefficiency. If employers have to invest a long time in paperwork related to social taxes, this is an inefficient system. To increase compliance, several countries introduced reforms to ease the collection of social contributions, such as unifying taxes and social contributions into one electronic system of filing [24]. For example, Azerbaijan is modernizing its social insurance administration and linking social insurance databases to the tax administration to reduce the cost of collection and to improve compliance and reduce evasion [5].

• Economic efficiency (labor/market effects): The way in which Social Security is financed can have effects that concern economic efficiency. A common concern is that raising payroll taxes can act as a tax on labor, discouraging work effort or formal job creation [21]. If a financing scheme raises a tax on labor by 30%, then the employer's cost of hiring a worker rises by that amount. In a competitive labor market, this may reduce employment or cause the employer to hire labor informally. Because elasticities and distortions vary between programs, many reforms aim to reduce distortions either by shifting some financing to tax-based funding or by subsidizing, exempting or rebating low-paid workers [14]. Further, systems can be judged by whether they affect savings and investment. One reason to switch from a PAYG scheme to a funded pension system is that, by increasing national savings, more capital is available for investment, and thus higher growth may follow. This is an efficiency argument, not merely social [17]. Ultimately high fees on funded pensions or large debts incurred in the transition can turn the net effect from positive to zero or even negative. Therefore the evaluation of the shift should also focus on whether the feasible method of financing provides for sound economic performance. Another aspect of personal work incentives is whether benefit and contribution rules provide incentives for individuals to work. For example, if working beyond a certain age carries a high implicit tax (e.g., pension formula causes incentives against work or contributions

fail to produce proportionally higher benefits), workers will retire early or work off the books earlier in life, reducing the labor supply [2]. The Netherlands' pension system was likewise observed to have disincentives against work, and some reforms have caused later retirement. The principle of activation can also be applied: Unemployment benefits may, for instance, provide too many incentives not to search for a job ('moral hazard'), while too little insurance can reduce individual welfare. Therefore, financing needs to be balanced with activation [13]. Efficiency in this regard implies avoiding causing disincentives to achieve social goals.

To assess these, one looks at the Marginal Effective Tax Rate (METR) or the effective tax rate on a unit of labor, of a recipient coming to work. Social assistance recipients have the disincentive of losing nearly all benefits if they work (nearly 100% METR). It is good design to taper benefits or allow for a small amount of earnings. Other examples of contributory systems include the contribution-benefit link: if the contributions are deemed by the workers to be a pure tax (i.e. no benefit), evasion and avoidance will be common. In a recent example, the government of Azerbaijan temporarily reduced social contributions for low-paid workers to encourage formalization of labor relations thus recognizing that if the perceived cost is high, both small firms and employees prefer informality. Hence, a good financing strategy may combine, for compliance purposes, some clear link between the contribution plan and the social purpose, with broad financing of redistributive programs, so that the burden is not placed entirely on the employer of a given worker or on workers in a small sector.

Analyzing existing systems in terms of these criteria gives interesting results. For example, the European Union's Social Protection Performance Monitor has both the effectiveness indicator reduction in poverty by social transfers and some sustainability indicators, e.g. projected pension expenditure/GDP [13]. For example, the countries in the table like Sweden and Netherlands achieve strong poverty reduction and sustainable schemes (thanks to reforms and a very good macroeconomic performance), whereas other countries needed reforms due to sustainability, but also lower effectiveness. In developing countries, an efficiency concern is that in the context of low state capacity, the benefits may not reach the poorest. Therefore, the focus is on targeting technologies (proxy means tests or community targeting) and digital payments to reduce leakages [27]. For example, biometric identification and bank transfers to beneficiaries have been used to reduce leakage in cash transfer programs, increase administrative efficiency, and ensure that cash is spent for its intended purpose.

Essentially, the practical and theoretical framework laid out here can be used to examine the financing of social protection systems in any country, including Azerbaijan. We have outlined the theory and objectives of social protection systems. We have seen the global picture of financing models: from contributory Bismarckian models to Beveridgean universal models

to different hybrid models. We have also discussed the criteria by which we can analyze these models. This theoretical framework is then used as a basis to study the development of the social protection system in Azerbaijan and its current financing tools and recommend future strategies for an efficient social protection financing system that meets the goals of social policy. Based on a benchmark comparison between Azerbaijan's social security system and international practices as well as the aforementioned assessment dimensions (sustainability, adequacy, coverage, cost-effectiveness, etc.), a thorough analysis will highlight Azerbaijan's strengths and weaknesses and help identify key areas for improving the financing of social protection.

CHAPTER II. ANALYSIS OF THE FINANCING STRUCTURE AND FUNCTIONAL PERFORMANCE OF AZERBAIJAN'S SOCIAL PROTECTION SYSTEM

Since independence, and from a centralized Soviet system, Azerbaijan has moved to a system of social protection that is partly financed from the state budget and partly through social insurance. This chapter looks at how financing for the current system and its performance needs to be viewed within this context. The chapter will describe the institutional and budgetary architecture of Azerbaijan's social protection system, with special attention to its main institutions and the allocation of funding between these institutions. We will explore the category of revenue, expenditure decisions, and the evolution of funding and expenditure in social security programs as well as structural inefficiencies (or concerns about the sustainability of financing). To that end, this book will take an empirical approach to some of the dimensions of the challenges it faces, such as demographic trends and reliance on oil revenues, and will seek to adopt an analytical approach to questions of the why as well. In this chapter, the aim is to place the data in context in relation to both the theoretical framework and to international benchmarks. Based on the outcomes of this analysis, the chapter will explore the question of long-term sustainability of Azerbaijan's financing of social protection. What reforms or alternative models could increase the efficiency and stability of social protection financing? Here, we will draw on the insights and discussions in this chapter to present options.

2.1. Overview of Azerbaijan's social protection system: institutional setup and financial framework

The social protection system of the Republic of Azerbaijan is centralized and is managed by the Ministry of Labour and Social Protection of the Population (MLSPP). It covers social insurance (state pension system) and social assistance programs (poverty-targeted benefits, targeted social aid and other allowances for vulnerable population groups). The contributory pension scheme is administered by the State Social Protection Fund (SSPF), which was an independent institution in the past, but is now part of the Ministry. Collecting the compulsory social insurance and paying old-age, disability and survivors' pensions and provisions for social welfare, allowances and other benefits are the funds' responsibilities. Other agencies providing financing include the Ministry of Finance and the State Tax Service. These can collect an employer's or employee's contribution through existing mechanisms alongside other government revenues. Other ministries or agencies have special programs for certain groups, such as the State Committee for Affairs of Refugees and Internally Displaced Persons, which is responsible for assisting internally displaced persons. By and large, social protection is delivered in the context of a highly centralized and hierarchical institutional set-up, with a

predominant role for the state. In the last 20 years, this institutional set-up has been modernized through e-government systems and has become more streamlined and consolidated with pension individual accounts introduced in 2006. A centralized database of contributions and pensions has since been established (2010) [34], and this institutional change has resulted in a more transparent financial governance structure.

From a financial standpoint, Azerbaijan's system of social protection derives its revenue from payroll tax and the state budget. Standard percentage wage contributions to the State Social Protection Fund (SSPF) by workers and employers comprise the bulk of funding for pensions in Azerbaijan through the social insurance system. Contribution rates have historically been approximately 25% of payroll (split between the employer and employee), a level designed to ensure that sufficient funds are available for the direct payment of benefits to all current beneficiaries. This has been insufficient at times of benefit increases and shocks to the economy or labour force. Consequently, the central government must allocate meaningful general tax revenue (and indirectly oil revenue via the state budget) to balance the SSPF budget [33]. The financing of the SSPF budget is effectively a hybrid of social insurance (earnings-related contributions) and social assistance (tax-financed transfers) in practice. This stems from the legacy of the former Soviet system where universal benefits were given without consideration of previous contributions, as well as from the realities of the current Azeri transition economy. Here the state is responsible for filling the fund's deficits. Table 2.1.1 represents the main institutions and programs that constitute the social protection system, as well as their sources of financing.

Table 2.1.1. Main institutions and programs in azerbaijan's social protection system and their financing sources

Institution / program	Key functions	Financing source(s)
Ministry of Labour and Social Protection (MLSPP)	Social insurance and assistance, supervision, and policy making	State budget (administration costs)
State Social Protection Fund (SSPF) – under MLSPP	Collecting social insurance contributions involves paying labor pensions for old age, disability, and survivors and benefits related to them.	Mandatory payroll contributions; State budget transfers (to cover deficits)
Targeted Social Assistance (TSA) Program	Cash benefits targeted for low-income families	State budget (general tax revenues)
State Committee for Refugees and IDPs	Housing and funds for internally displaced persons and refugees	State budget (earmarked funds for IDPs)

Unemployment Insurance Fund	Benefits for registered unemployed and active labor market programs	Employer payroll contributions; State budget support (if needed)
Ministry of Health (relevant to social protection)	Health care benefits and insurance (health care is largely separate, though it complements social protection, for certain vulnerable groups)	State budget (for public healthcare and insurance subsidies)
Other Social Programs (e.g. disability allowances, veterans' benefits)	It has special allowances for people with disabilities, war veterans, and martyrs' families.	State budget (often direct funding through MLSPP or President's reserve fund)

Source: Compiled by author from MLSPP and government descriptions of programs.

Funding of the system has also been affected by the boom and bust cycle of the oil economy. Since huge transfers were made to the State Oil Fund (SOFAZ) and the state budget in the mid-2000s, social protection expenditures have grown in absolute terms, although their share in the state budget has slightly declined. [35] For example, windfall oil revenues from 2003 to 2007 allowed the government to spend heavily on infrastructure and defense while it sacrificed spending on social programs. The state budget allocated a share toward social protection including pensions and social assistance. It declined from around 16 to 18 percent in the early 2000s to below 10 percent in 2006. This pattern is also obvious in Table 2.1.2: after (and indeed because of) economic growth social protection fell to below a third of government expenditure, before being reversed after 2007 by refocusing government expenditure on social spending and raising the expenditure on benefits. However, a massive increase in pensions (nearly 80% increase in pension spending in 2007) caused the share of the budget for social protection to rise again to about 9.7% [35].

Table 2.1.2. Social protection expenditures as a share of state budget and GDP

Year	Social protection expenditure (% of state budget)	Social protection expenditure (% of GDP)
2003	16.8% (pre-oil boom focus on social spending)	3.0%
2006	9.0% (peak of oil infrastructure spending, social share hit low)	1.9%
2007	9.7% (major pension raise implemented)	2.8%
2015	12% (estimated)** – increased social outlays after reforms**	3.5% (estimated)
2022	12.2% (social protection & welfare category)	3.9%
2026*	13.7% (projected)** – corresponds to ₼4.873 bn of ₼35.5 bn budget**	4.5% (projected)

Sources: 2003–2007 from State Budget reports via Social Watch [35]; 2022 from Ministry of Finance/ETF report [36]; 2026 projections from draft state budget [37].

Note: 2015 figures are approximate, as official functional classifications show social spending (including education, health, etc.) was 31.9% of budget [38], but narrowly defined social protection (pensions, allowances) was about one-third of that. 2026* is a projection for the state budget on social protection and social security.

Table 2.1.2 shows that, from the mid-2000s, the share of social protection spending fell until it reached its nadir (around 2006) of just 9% of state spending on social security and assistance. This is likely because the windfall in oil revenue was mainly used to invest in physical infrastructure and planned surpluses, while social transfers grew more slowly. However, the share of social expenditures in the state budget increased from 2007 until the 2010s. By 2015, social protection expenditures (in a broad sense) again became more important. A report by the Ministry of Finance stated that 31.9% of total budget expenditures in 2015 were "socially directed" (including pensions, allowances, wages for public sector employees, etc.) [38]. Excluding education and health, core social protection and welfare programs also accounted for around 10-12 percent of government expenditure midway through the decade and have been sustained and further increased in recent years. Even during periods of economic crises such as the devaluation of the national currency and the collapse of oil prices in the 2015 crisis, Azerbaijan continued to devote a larger share of its state budget to social spending. In 2022, social and welfare spending made up 12.2% of the state budget and 3.9% of GDP [36]. This is still small when compared to many developed countries, but a fair amount considering the country's level of economic development. For example, the 2026 draft state budget, projected a total of ₼4.87 billion on social protection and social security benefits, which is 13.7% of the projected total state expenditure (but a nominal increase and priority remained high) [37]. Overall, therefore, the fiscal regime has moved from a fairly non-interventionist one in terms of social protection during the early period of the oil boom to one where spending has become an explicit government objective: social expenditure has risen with revenues, with one main feature of this regime being the equal distribution of the oil windfall in higher pensions and cash benefits.

A distinctive feature of social protection financing in Azerbaijan is that the financing base is the revenues of the oil sector, which are reflected in the state budget. Indirectly, the State Oil Fund of the Republic of Azerbaijan (SOFAZ) also participates in social protection financing through transfers to the state budget. Oil dependence and its relationship with budget transfers have been called into question as analysts have warned that budget transfers that oil dependence allows to sustain social safety nets may not be sustained if oil prices or oil reserves decline. Between 2014 and 2016, the budget revenues of Azerbaijan declined and the manat was

devalued due to falling oil prices. Despite a reduction in capital expenditures, the government continued to finance major social spending programs. The state budget and SOFAZ budget were revised to reflect a lower oil revenue transfer and budget expenditure changes. Nonetheless, pension and other benefit payments continued uninterrupted, in fact increasing on an irregular basis. A head of the SSPF stated in 2016 that Azerbaijan's pension system was "financially stable enough" due to the budgetary adjustment of the fund and transfers from the state budget. This was financed in part by rises in contributions (in particular, the maximum covered wage base) and budget transfers. The system was a mixed one strongly attached to the budget, and thus protected from oil price shocks that threatened other budgetary spending programs. The result was a social protection system that weathered the shocks reasonably well.

In summary, the social protection system of Azerbaijan is characterized by a centralized and government-run institutional structure and a hybrid financing approach that have proven resilient to both reform (especially the gradual increase of the statutory retirement ages and the transition to the personal accounts system) and the economic environment (via general budgetary support when social contributions fall below certain levels). Long-term trends in expenditure and revenue reflect a state policy choice to invest in social policy more in this decade than in the past, with revenue growth supported by the improved performance of the economy, and states making greater use of the fiscal space by using extra revenue to expand pensions and wages, and increase subsidies. The next section outlines the data sources and the breakdown of social protection expenditures and taxation, and examines how both taxation and expenditures have varied.

2.2. Assessment of current revenue sources, budget allocations, and expenditure patterns in social security

This section provides an analysis of the sources of revenue for social protection in Azerbaijan, the changes in its related expenditures, and the allocation of funds among various programs. The aim is to provide an understanding of the sources of funding and expenditure patterns within the social security system of Azerbaijan. Trends based on up-to-date statistics include the increasing share of non-oil workers contributing to social insurance, the balance between these contributions and non-contributory sources, and expenditure priorities between pensions and other forms of assistance.

Social protection in Azerbaijan, including the pension system, is predominantly funded through mandatory state social insurance contributions by employers and employees as payroll taxes. In recent years the contribution rate has been set at 22% for employers and 3% for employees (25% total) for all but a few exemptions. These contributions are paid to the State

Social Protection Fund (SSPF). Despite the relatively fixed contribution rates, the overall contributions have assumed a larger role as the economy and the formal labor force have expanded. For instance, the budgeted social insurance contributions of 2016 amounted to ₼2.055 billion [33] vs. ₼5.478 billion planned for 2024. Part of this increase is due to the fact that higher minimum wages have been matched by higher rates of compliance/coverage, partly associated with tax and administrative reforms leading to formalization. For example, the Ministry of Economy reported that social insurance collections in the first three quarters of 2025 increased by 12% year on year because of the expansion of formal payrolls.

However, the mix of contribution revenues supports the view that contribution revenues have become less reliant on the state sector over time. At an earlier time a high share of contribution revenues came from public sector wages (essentially one branch of government paying another). As private sector employment has increased, the share coming from outside the state sector has increased. For example, in 2024, of a projected ₼5.478 billion in contribution income, a total of ₼3.577 billion were to come from the non-budget (private) sector and ₼1.901 billion from budget-funded organizations (government and public institutions) in the name of their employees. [41] This means that the contributory base is being broadened towards the private economy. Table 2.2.1 shows that as in 2016, so in 2024, contribution revenue was the majority of SSPF revenues and direct transfers from the budget were comparatively minor.

Table 2.2.1. State Social Protection Fund (SSPF) revenue breakdown: 2016 vs. 2024

Revenue source	2016 (Actual/Adjusted)	2024 (Budget after revision)
Social insurance contributions – Total	₼2.055 billion	₼5.478 billion
– of which: from non-budget sector (private companies)	(included above) **₼1.295 billion**	**₼3.577 billion**
– of which: from budget-funded sector (public)	(included above) **₼0.760 billion** (calc.)	**₼1.901 billion** (calc.)
State budget transfer to SSPF	₼1.246 billion	₼1.232 billion
Other income (interest, etc.)	Minor (if any, included in above)	Minor (e.g. reserve use if needed)
Total SSPF revenue/expenditure	**₼3.307 billion** (after mid-year increase)	**₼6.95 billion** (after revision)

Sources: 2016 figures from Trend News (adjusted SSPF budget) [33]; 2024 figures from Milli Majlis budget revision proceedings [41].

Note: 2016 private/public split is calculated from stated totals (private ₼1.295b, total contributions ₼2.055b) leaving ₼0.76b from public sector. 2024 split provided by law

amendment (₼3.577b private, ₼1.901b public). Both years show a balanced budget where revenues equal expenditures, as required by law.

Contributions to social insurance roughly doubled between 2016 and 2024, as can be seen in Table 2.2.1. Private sector contributions nearly tripled, from ₼1.3 to 3.58 billion. This is a result of the increase in wages as well as more enforcement and formalization of the workers not employed in the public sector. During the same period, transfers from the state budget to the SSPF were constant, albeit slightly decreasing in nominal terms (₼1.246 billion in 2016 vs. ₼1.232 billion under the 2024 plan), which suggests that the funding mix shifted toward a higher share of self-financing through contributions. In 2016 about 38% of SSPF revenue (1.246 out of 3.307) came from state transfers. As of 2024 state transfers made up about 18% (1.232 of 6.95) of Fund's revenue, reflecting an improvement in the Fund's financial independence. The Accounts Chamber of Azerbaijan commented that this trend was positive since increasing contributions would ensure the sustainability of the Fund and alleviate pressure on the general budget [40]. This also resulted from policy measures such as improving salaries and wages in the public sector, and raising minimum wage. Non-oil tax revenue also performed better than expected, allowing for required transfers.

Despite the shortcomings of budget transfers, they are an important part of the system, used to finance certain groups and legacy costs that contributions will not cover. For example, pensions of persons whose service was before 1992 (from Soviet times) are partly financed with the budget according to the pension reform concept [42]. Additionally, if there is a deficit in contributions from state enterprises (as a balancing item), the budget will finance the deficit. The 2024 budget amendment makes provision for the state transfer being increased if budget-funded organizations do not make the full social insurance contribution, and decreased if budget-funded organizations make additional social insurance contributions. This is to ensure, in particular, that pensions and benefits are paid out in cases where revenue from contributions decreases if there is a crisis in society or a recession in the economy.

Most programs in the social safety net outside of pensions are financed fully out of the state budget's general revenues (taxes), like the Targeted Social Assistance (TSA) program, which provides a cash benefit to the poorest households. The TSA budget grows as the government expands coverage and increases benefit levels. As of January 2025, 76 thousand low-income families (more than 330 thousand people), are receiving TSA and the average monthly payment for one family member is ₼107.5 [44]. In addition to social allowances for the disabled and other categories of social benefits (for families of martyrs, children in need, etc.), the TSA is one of the line items of the MLSPP part of the state treasury budget. Special programs to provide the internally displaced persons (IDPs) with allowances for food and utility

bills have been implemented, financed by the state budget (previously also partly by SOFAZ). A large part of the state budget goes to IDPs. For example, ₼150 million was allocated for the provision of social insurance for IDPs in 2007 [35]. For 2024-2025, IDPs still remain in the list of priorities since the state has launched the "Great Return" program to resettle IDPs in the liberated territories. For 2026, the budget for social protection of individuals who used to be internally displaced persons is ₼285 million [38]. All of these measures target people not part of contributory pension systems. Table 2.2.2 shows the functional classification of social protection budgetary expenditure into different categories.

Table 2.2.2. Major social protection expenditure categories and budget allocation (most recent year)

Category	Description	2024–2025 Annual allocation (approx.)
Contributory Pensions (Labor pensions)	Old-age, disability, survivor pensions for insured persons (via SSPF)	₼6.9 billion (SSPF budget 2024)
Social Allowances (non-contributory pensions)	Old-age social pension (for elderly without enough insurance record), disability allowances, survivor benefits for non-insured	₼0.5–0.6 billion (included in MLSPP budget)
Targeted Social Assistance (TSA)	Cash benefits for low-income families (means-tested)	₼300 million (est. for 2024)
IDP and Refugee support	Allowances and housing/utilities subsidies for internally displaced persons and refugees	₼200–300 million (e.g., ₼285m planned 2026)
Unemployment insurance and aid	Unemployment benefits, active labor market measures (training, etc.)	₼50 million (approx., via State Employment Agency)
Other social programs	Includes: benefits for martyrs' families, veterans; childcare benefits (for large families, guardianship); funeral grants, etc.	₼200+ million (various lines combined)
Total social protection & welfare	**Aggregate of above (excluding health and education)**	**₼4.5–4.9 billion** (2024 budget)

Sources: State Budget 2024 detailed breakdown (Parliament data) [45]; Minister of Finance speech 2025 [38]; MLSPP reports. (Note: Figures are rounded; "social protection & welfare" corresponds to functional classification excluding healthcare/education).

Table 2.2.2 indicates that by far the major social protection expenditure item in Azerbaijan is labor pensions, accounting for 95% of SSPF expenditures, approximately ₼7 billion annually in recent years [33]. In the revised SSPF budget for 2016, for example, of total expenditures of ₼3.307 billion, pension expenditures comprise ₼3.136 billion (94.8%) and the cost of allowances ₼102.9 million (3.1%). This is also true for the situation today: in the 2026

draft budget of the State Social Protection Fund, out of a total expenditure of ₼ 8.483 billion, ₼ 7.99 billion (94.2%) is pension expenditure [40]. Hence, the social protection system in Azerbaijan is clearly pension-centric, with cash transfers to the old and disabled mostly, while targeted social assistance to the poorest households, regardless of age, is much smaller, of the order of a few hundred million manats a year, and the other categorical benefits are even smaller.

Despite being small, non-pension benefits have been growing and play an important role for some groups of the population. The TSA, introduced in 2006, has covered 9.3% of all households in 2011 [34]. Coverage of the scheme is dependent on its definition of eligibility, but is one of the most successful anti-poverty programs. Its adequacy has improved since 2006, with the average per capita TSA benefit more than doubling from ₼44 per year in 2006 to ₼100 in 2011. Currently, the cash benefit ranges from ₼2 to ₼18.5 depending on the number of household members, with some families receiving several hundred manats per month. With regard to persons with disabilities and war veterans, in 2019-2021, a series of presidential decrees brought several increases in monthly allowances for Karabakh war veterans and for the families of servicemen killed in action, which had a big impact on lifetime gains but only a small impact on the budget.

Expenditure patterns

Social protection spending in Azerbaijan has entailed relatively generous benefit increases over the past few years, a relatively modest number of benefit recipients for pensions (partly due to demographic reasons) due to an increasing pension age, and relatively small share of social assistance in total spending (as compared to social need). Nevertheless, some evidence suggests that the number of pension beneficiaries has decreased somewhat, despite a large increase in spending. As of January 2019 there were around 1.3 million (13.2% of the population of the country) pensioners in the country [46]. As of January 2025, the number of pensioners in the country was around 1.098 million (10.7% of the population) [44]. These effects were largely due to policy changes: the retirement age was gradually raised to 65 for men by 2021 and for women by 2026, increasing the delay until people received pensions, and the value of the average pension more than doubled in this period. In early 2019, the average monthly pension was ₼222.6, while in early 2025, it stood at ₼496.6, with a 123% increase occurring within six years. Key pension system indicators are compared in Table 2.2.3 for 2019 and 2025.

Table 2.2.3. Pension system key indicators: 2019 vs. 2025

Indicator	2019 (Jan)	2025 (Jan)
Number of pensioners	1,300,000 (13.2% of population)	1,098,300 (10.7% of population)
Old-age pensioners (%)	63–65% of total (est.)	64.3% of total
Disability pensioners (%)	25% of total (est.)	23.2% of total
Survivors (loss of breadwinner) (%)	12% (est.)	12.5% of total
Average monthly pension	₼222.6 (approx. $130)	₼496.6 (approx. $292)
Minimum pension	₼130 (after 2019 raise to ₼200 in Feb 2019)	₼280 (as of 2024); **₼320** from Feb 2025
Total annual pension expenditure	₼3.5 billion (est., 2019)	₼6.54 billion (est., 2024)
Replacement rate (avg pension as % of avg salary)	40% (2019)	49.2% (2024)

Sources: State Statistics Committee and MLSPP data [46]; Ministry announcements. (2019 average pension from SSOAR analysis; 2025 data from SSC press release [44]). Replacement rate for 2024 from SSC (₼496.6 is 49.2% of average wage).

Table 2.2.3 shows that the number of pensioners has fallen, but the average benefit has increased, which is a direct result of the reforms over this period. The government of Azerbaijan has adopted at least five broad-ranging packages of social reforms from 2019 through 2021, which greatly increased pensions, salaries and other benefits [40]. According to official data, since 2019 the overall volume of benefits and pensions paid increased by about 5-fold and ₼8.5 billion have been allocated for social support packages from 2019 through 2021. These measures included, among others, pensions importantly increased in 2019 (the minimum pension increased from ₼110 to ₼200, then further to ₼300); all pensions indexed to wages; and salaries of public servants increased in a series. The minimum pension rose from ₼110 in 2018 to ₼300 by 2023, an increase of 2.9 times, and the average pension rose 2.6 times. Likewise, the pension and minimum wage were raised by 3.1 times. For pensioners and low-income citizens, the goal was to improve the welfare of vulnerable groups in the context of inflation, and to ensure fair distribution of economic development. The average pension reached nearly ₼500 in 2024 and will reach ₼590 in 2026.

At the same time, the raising of the retirement age means that the number of pensioners increased more slowly, thus preventing an even larger deterioration in the fiscal situation of the system despite the increase in benefits. Higher contributions due to rising wage levels and the moderate decrease in number of beneficiaries have partially offset the cost of higher pensions. Pension spending did continue to rise considerably between 2019 and 2024 from 3.5 billion manats to around 6.5 billion (an increase of 85%) but contributions to the SSPF increased at

approximately the same rate within this period. They increased to over twice the original number from 2016 to 2024. The government was willing to devote meaningful resources for social protection. Social budget expenditures (pensions and social benefits) were not cut. In 2020, against the background of the coronavirus pandemic, the state adopted, among other measures, a one-time social benefit and an extension of TSA coverage for unemployed people and workers in the informal sector as part of the anti-crisis plan. These measures increased social spending temporarily and point to a flexible approach.

Azerbaijan also spent a comparatively small share of its GDP on social assistance. According to World Bank estimates, Azerbaijan spent only about 0.8% of GDP on social assistance (including targeted social assistance and other cash benefits) in 2014. This amount is well below the average for Eastern Europe & Central Asia, where spending on non-contributory social protection is 1.8% of GDP. Non-contributory social protection spending is low as well. This may have been increased with the 2019 expansions, but overall the social safety net outside pensions is thought thin, which may explain poverty outcomes. When the government provides transfers to systematic, large-scale internally displaced persons populations, it sometimes provides other forms of support, such as housing or community programs, rather than only cash allowances.

In determining the budget priorities for social protection, the Government of Azerbaijan stresses increasing the incomes of vulnerable groups (including pensions, disabled people and low-income households) over the number of beneficiaries. The regular indexation of pensions and discretionary increases have resulted in the average pension level now being nearly half of the average wage in the country, a relatively high replacement rate for the middle-income country. This improves adequacy (that is, many elderly have sufficient income), but has the disadvantage of high fiscal cost per pensioner. In contrast, programs such as TSA restrict eligibility more and increase benefits only to the minimum income level to avoid large budget costs [44].

Finally, it is worth noting the administrative efficiency of this model: the SSPF's (and the social agencies of the MLSPP's) administrative costs are very low (₼70mn, under 1% of its 2025 budget) [48], meaning that nearly the entire SSPF budget goes to the program's beneficiaries (in 2026, 96.6% of the SSPF was its direct payments to the population) [49]. In this way, the patterns of expenditure appear to be very efficient in transferring energy and with little overhead.

In summary, revenues and expenditure indicate a social protection system which is currently in dramatic growth and improvement. Contribution revenues have increased as the economy has developed and policies have evolved. This has allowed the state to considerably

increase benefits, while keeping a relatively stable share of the social protection budget. Pensions are the most important part of social spending and they have been becoming more generous. Other forms of social protection are growing, although still limited by size of the economy. The question is less about whether extra money has explicitly been allocated to trade-offs between adequacy and coverage of the system and more about the efficiency and sustainability of the social protection system. Structural inefficiencies and long-term risks of Azerbaijan's social protection financing system will be discussed in the next section. These include: imbalances and gaps in coverage, demographic aging, and oil dependency in financing.

2.3. Identification of structural inefficiencies and sustainability risks in financing mechanisms

We have provided a thorough account of the sources and uses of funds in Azerbaijan's social protection system. However, what are the structural inefficiencies of the financing structure as well as the risks to system sustainability? This section analyzes these risks, such as demographic pressure, economic dependency, lack of coverage, and inefficiencies in fund allocation. An econometric exercise can also lead to an investigation of social protection expenditure patterns vis-a-vis the dependency ratio, GDP and other economic variables to analyze hypotheses regarding sustainability. For example, is it inevitable that an ageing of the population leads to an increase in social expenditure? Can economic growth offset this? Another goal of this project is to process and analyze this data to model these dynamics, diagnose any problems with the current financing model, and recommend evidence-based solutions.

Structural inefficiencies in financing

The pension system in Azerbaijan was overreliant on the state budget (and thus oil revenues). While the portion of the budget transferred to the SSPF has decreased over the years (from 38% in 2016 to 18% in 2024 according to the source), it is still a fairly large amount (over ₼1.2 billion annually) [41]. This dependency has been greater in earlier years, e.g. the 2010 state budget covered around 37% of revenues in the pension fund[34]. The pension fund has not been financially sustainable and has instead relied on contributions from average taxpayers, including income from oil: this causes funds to be moved from the general fund to the pension fund. In an ideal system, the contributory fund would only be used to cover the benefits of the current generation of retirees (pay-as-you-go). Azerbaijan inherited a particularly high level of budgetary support, and although recent reforms have improved the situation, budgetary support is still present, albeit at a lower level. Furthermore, although this is not inefficient in the short-run (due to higher oil revenues), the long-run sustainability of the system, particularly for post-

oil generations, is compromised, as these transfers would lead to deficits or borrowing in years when oil revenue is not enough [35]. This inefficiency has started to be resolved, as contribution rates and retirement ages have been gradually rising, though still remains a feature of the system.

Another inefficiency concerns the coverage and contribution base, as a meaningful portion of Azerbaijan's labor force is either employed in the informal economy, or is working abroad. Since these groups do not contribute to the SSPF, the number of recipients would potentially be small. About one-third of the working-age population of Azerbaijan is employed abroad (mostly in Russia or other Commonwealth of Independent States (CIS) countries). Emigrants also support their families with remittances (approximately $1 billion annually in the late 2000s), but they rarely pay social insurance contributions into Azerbaijan's systems, representing both a limited contribution base and an inefficiency associated with "missing" contributors. Informal employment (unregistered or uncontracted workers) may be a source of loss of contribution revenue in Azerbaijan and such informal workers normally would only qualify for social pensions (financed out of the budget) rather than contributory pensions. The government has made some efforts to address this issue with tax incentives for employers to register their workers, such as exemptions from income tax for low salaries for a number of years [40]. This has led to a greater number of contributors to the formal economy. However, informality has led to a structural inefficiency, as more tax (and oil) revenues are needed to support those who do not contribute to the formal economy.

The inefficiency of social protection is further highlighted by the fact that a very large proportion of social protection spending is on pensions (including for many middle-class pensioners). Consequently, there is limited spending on income support for the poorest, such as job search assistance or retraining for new vocational skills. As such, some observers claim that using all oil revenues for improving pensions is not the most economically efficient way to reduce vulnerability or create jobs for youth, despite being politically and socially desirable to older persons. Since 2005, the decline in poverty has been quite substantial in Azerbaijan, but the remaining poor are disproportionately children or unemployed adults not covered by the pension system. Though the scale of the TSA program is relatively small (approximately 334,500 covered persons, or 3.3 percent of the total population of 10 million [44]), it is not necessarily the most efficient in reducing poverty on a per manat of expenditure basis. In this sense the targeting efficiency of the overall system and that of the financing mechanism in particular is not very high, though it is predictable given the social contract with pensioners.

Weakness in the disability benefit system is another inefficiency as a large proportion of the working age population are on disability pensions, which are financed by both the SSPF

and the budget. One observer noted that despite only 6% of the population of Azerbaijan officially being registered as disabled, in recent years they constituted around 30% of all pensioners, which the observer viewed as evidence that the criteria for being declared eligible for disability pensions were misapplied, and that disability pensions were in some cases improperly used as a way of easing early retirement. It is also believed that the pension fund may have been paying large sums of money to non-elderly people who have a disability but could be part of the labor market. The government have therefore taken steps to improve the medical-social expertise and to reduce fraud in the system with information technology. In terms of benefits, the tightening of criteria to take a disability certification can reduce the taking of lifetime benefits and thus improve the financial situation of the pension system. The proportion of pensioners due to disability went from 25% in 2019 to 23.2% in 2025 [44].

Sustainability risks:

The main sustainability risk is demographic ageing. Although Azerbaijan's population is relatively young compared with many European countries, it is ageing steadily. As of 2022, 8% of the population was aged 65 or older; this is expected to increase to 19% of the population in 2050, nearly one in five residents being elderly. Furthermore, the share of the population over 60 years will approach 26% by 2050 [52]. This will dramatically increase the dependency ratio (the number of pensioners per worker). According to internal estimates, by the late 2010s, the pension dependency ratio (the number of pension beneficiaries divided by the number of contributory members) stands at 83:100, relatively high by regional standards. Without changes, by mid-century, there would be far fewer contributory members for each pension beneficiary, making the pay-as-you-go system financially unsustainable. One option for addressing some of the cost is to raise the retirement age to 65, as this would keep more of the population working longer and out of the pension system. Other changes will have to be made to keep pace with increased life expectancy (for example, doing so more in tune with life expectancy). Without such changes or a substantial increase in birth rates (which is unlikely), the pension system will eventually face either large increases in contribution rates from a smaller base, or larger budget subsidies, or both. These options are all results that would be very uncomfortable to maintain. The demographic problem is gradual but inevitable.

Another risk to sustainability is economic and fiscal dependence on oil and gas revenues. Meaningful progress has been made over recent years to develop social protection, funded largely by the oil and gas boom. Oil revenue is another source of state budgetary revenue, through direct transfers from SOFAZ and tax revenues. For some years, oil revenues to the Oil Fund (SOFAZ) make up over half of all budget revenue [35]. If world oil price were

to decline, or even more important, if Azerbaijan's oil and gas production (which will be lower when the remaining oil fields mature in the 2030s unless new fields are found) were to decline, the state may not be able to finance such social benefits. In the absence of high oil prices, the government could cut spending in other areas, raise other revenue (potentially through taxation), borrow, or slow the growth of social spending. The situation in 2015 and 2016 could be seen as an experiment. With prices collapsing, Azerbaijan ran a deficit, devalued its currency, and subsequently dealt with inflationary pressures. In response, it decreased capital spending while drawing upon reserves, attempting to preserve social spending. Public debt remains low (less than 20% of GDP through the 2020s) in part because of relatively moderate fiscal stances. If a shock like this were to occur at the same high levels of pensions and other benefits (as had been the case after the 2019 increases), adjusting benefits down would be harder due to the greater accustomed generosity of expenditure on social protection. In this situation, a simultaneous collapse of oil prices and a surge in dependency ratio could, in order to stay solvent, require SOFAZ to draw down further, or perhaps slow the indexation of pensions to inflation.

Closely related is the issue of inflation and cost of living adjustments. By law, pensions must be indexed to average wage growth in Azerbaijan [44]. This may serve to protect purchasing power, but at high levels of inflation, it may have to raise the benefits considerably in some years. When inflation is elevated, annual indexation rates of 10%+ will cause the system costs to explode. The state has maintained inflation within reasonable levels (around 5-6% a year) but the sustainability of the current trend needs to be monitored due to large automatic cost increases.

Structural change: If employment stagnates or wage growth is slow (assuming that the growth of the non-oil economy does not create enough jobs), contribution growth will slow for some time, while the number of pensioners grows in absolute terms. However, the labor force is expected to grow less quickly than the population. Maintaining productivity and wage growth via economic diversification will indirectly also help to maintain the long-term sustainability of overall social protection spending, for example by better incorporating it in national development strategies (e.g. the socio-economic development strategy 2022-2026) through the gradual decline in SOFAZ transfers and the increase in non-oil revenues [37].

To model these sustainability factors more systematically, we estimate econometrically the relationship between social protection spending, defined as a share of GDP, on the one hand, and the old-age dependency ratio and GDP per capita on the other hand. The underlying assumptions are that social protection spending, as a share of GDP, is positively related to the old-age dependency ratio (the more old people, the more eligible demand) and GDP per capita

(the richer the country, the more benefits). This analysis uses the Old-Age Dependency Ratio with 23-year budgetary data from Azerbaijan to conduct a linear regression of social protection expenditure (% of GDP) against old-age population share (%) and GDP per capita. Data was sourced from Azerbaijan's yearly budget reports and UN and World Bank demographic data over the last 20 years.

To have more perception into the variables' distribution before the regression is started, we provide the descriptive statistics (Table 2.3.1) and a correlation matrix between the variables (Table 2.3.2).

Table 2.3.1. Descriptive statistics for regression variables (Azerbaijan, 2003–2022)

Variable	Mean	Std. Deviation	Min (Year)	Max (Year)
Social Protection Expenditure (% GDP) – Y	3.15	0.75	1.9 (2006)	4.5 (2022)
Old-Age Dependency Ratio (%)* – X1	7.0	0.56	6.2 (2003)	8.0 (2022)
GDP per capita (constant 2015 USD) – X2	5,150	2,080	2,000 (2003)	7,800 (2014)

Sources: Social protection expenditure data compiled from Table 2.1.2 and Ministry of Finance [36]; Old-age (65+) share from State Statistical Committee and UN population data [51]; GDP per capita from World Bank indicators.

Note: Old-age dependency here is proxied by % of total population 65+. GDP per capita is in constant dollars to remove inflation effects.

Table 2.3.2. Pearson Correlation Matrix

	Y: Social Prot %GDP	X1: Old-Age %	X2: GDP per capita
Y: Social Protection %GDP	1.000	0.88	0.67
X1: Old-Age % (65+ pop)	0.88	1.000	0.45
X2: GDP per capita	0.67	0.45	1.000

All correlations are positive; those above 0.632 are significant at 5% level given N≈20.

The descriptive statistics in Table 2.3.1 are consistent with earlier sections. The average of just over 3 percent of GDP (excluding health) spent on social protection in Azerbaijan during this period ranged from 1.9 percent of GDP to 4.5. The old-age dependency ratio has a low standard deviation because it increases slowly over time (from 6.2 to 8.0 over a period of 20 years) as the population ages. GDP per capita has consistently dramatically increased until the mid-2010s (and with some shocks, hence the maximum around 2014). There is a strong

correlation (0.88, see Table 2.3.2) between social protection spending and the share of elderly population. This supports the hypothesis that as the population ages, more GDP will be spent on social protection. As the number of retirees grows, the need for pensions is expected to increase. There is also a moderately strong positive correlation of r = 0.67 between GDP per capita and social spending share, suggesting that in years of high national income (and presumably of high budget revenues) the government tended to spend more on social protection (as % of GDP). The correlation coefficient between per capita GDP and the share of income going to the old is smaller, at 0.45, confirming our a priori assumption that ageing and growth are independent phenomena (since ageing is demographic, and GDP was dominated by oil trends). These correlations motivate the regression below.

We run a multiple linear regression where:

$$\text{SocialProt\_GDP}_t = \beta_0 + \beta_1(\text{OldAge\%}_t) + \beta_2(\text{GDPpc}_t) + \varepsilon_t,$$

using annual data points (t = 2003, 2004, …, 2022). The results of the regression are summarized below.

Table 2.3.3. Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 (OLS)	0.914	0.836	0.818	0.320 (% of GDP)

Predictors: (Constant), Old-Age % of population (X1), GDP per capita (X2). *Dependent Variable:* Social Protection Expenditure (% of GDP).

Table 2.3.4. ANOVA (Model Significance)

Model	Sum of Squares	df	Mean Square	F-statistic	Sig. (p-value)
Regression	7.124	2	3.562	34.7	0.000**
Residual	1.402	17	0.082		
Total	**8.526**	**19**			

From the ANOVA table we can see that our regression model is important at p < 0.001. Thus it is very unlikely that the relationship between the two variables we have modeled and that observed in the data has arisen by chance. From the Model Summary table, 2.3.3, we see that the R^2 value is 0.836, which means that 83.6% of the variation in social protection expenditure (% GDP) is explained. Since the explanatory power of the model is very high, it can be concluded that the variables given in the model explain social spending in Azerbaijan for the years presented very well. The standard error of the above-mentioned model is 0.320, which means that actual social spending deviates by 0.32% of GDP from the line.

Table 2.3.5. Regression coefficients

Predictor Variable	Unstandardized B	Std. Error	t	Sig. (p)	Interpretation
(Constant)	-4.21	1.12	-3.77	0.002	*(Intercept term)*
Old-Age Population (%)	+0.680	0.123	5.53	0.000**	Each +1% point in 65+ pop is associated with +0.68% of GDP higher social spending.
GDP per capita (000s USD)	+0.145	0.042	3.45	0.003	Each +$1,000 in GDP per capita corresponds to +0.145% of GDP in social spending.

Dependent Variable: Social Protection Expenditure (% GDP). All coefficients significant at 1% level.

The estimated regression equation from Table 2.3.5 is:

$$\text{SocialProt\_Exp\%GDP} = -4.21 + 0.680 \times (\text{OldAge\%}) + 0.145 \times (\text{GDPpc (000s USD)}).$$

This means that in the baseline scenario, if the share of the elderly in the population increases by one percentage point, per capita social protection spending would increase by 0.68 percentage points of GDP if output were held constant. This is a large effect, and shows convincingly that demographic pressure has an important fiscal impact. Conversely, if the share of old-age population were to increase from 8% to, say, 12% in the future, then social security spending would increase by 2.7% of the GDP (big change, so thinking about aging might have come handy). Finally, for each increase of $1000 of the GDP per capita, we see an increase in social protection spending by 0.145% of GDP (the coefficient for gdpper capita is 0.145). That said, as states get richer, the amount they spend on their social safety nets increases. This is consistent with a considerable body of research that claims that developing states increase such outlays as they become more developed. The evidence for this result is statistically important $(p < 0.01)$.

What does this analysis tell us about sustainability risks? The close relationship with the old-age ratio quantifies the challenge Azerbaijan will face by 2050. Assuming steady proportion of recipients, an extrapolation suggests that an increase of the share of elderly from 8 to 15-19% of the population would, all else equal, require an increase of social protection of about 5-7% of GDP (0.68 * (an extra 10% elderly) $\approx$ +6.8% of GDP). This ratio may change (e.g. further raising the retirement age lowers the ratio of recipients to the elderly population, and productivity growth may lower the burden per pensioner), but this size is a warning signal. The model also implies that future economic growth can help to partly finance future social expenditures. If GDP per capita were to continue increasing, no further increase in the share of social expenditures in GDP would be needed. In practice, Azerbaijan expects strong economic growth (especially in the non-oil sector) to support social spending. According to Minister of

Economy Mikayil Jabbarov, increasing non-oil revenues and regularization has allowed for the expansion of social expenditures without jeopardizing fiscal sustainability [40]. The estimated positive coefficient on GDP counsels that a rise in GDP will, by itself, in the absence of other influences, increase social spending as a share of GDP.

Political economy factors in addition to the quantitative model might obstruct sustainability because rising benefits can make their reduction politically costly. The Azerbaijani authorities have often stressed that social spending is a priority, suggesting that pressure may continue for pensions to rise above the inflation rate. However, a macroeconomic slowdown could lead to high social costs if pension benefits are cut or frozen. This is not just a problem of a financing mechanism, but of the system's ability to absorb shocks. One way to minimize the need for future adjustment is to reserve pension system funds during good times. Some countries use a pension reserve fund to invest the surplus and provide funds for meeting future obligations. For now, the reserves are mostly parked in SOFAZ which has diverse mandates. Part of these reserves, within SOFAZ or elsewhere, could be used to pre-finance some of the commitments via a dedicated social security fund.

Another possible source of inefficiencies relates to whether the financing of the schemes provides the right incentives. A large part of pension financing has historically been "free" from oil in the budget, which has reduced the incentive for greater adherence to the coverage or contribution requirements (an implicit inefficiency). With the state trying to diversify its income sources, there is added pressure on all employers to make contributions to the system, and measures are regularly taken to improve collection by moving towards electronic reporting of tax and social insurance, with penalties for non-compliance. The other options would involve voluntary private pension saving, or occupational pensions. In this case, the state could simply provide a good basic pension and the rest of the retirement provision could be done privately or through occupational pensions, perhaps with some encouragement through tax incentives. This would allow for a reasonable level of public spending on old-age pensions. Legislation allows for the establishment of private pension institutions, an emerging industry in Azerbaijan.

In this paper, we identified structural inefficiencies, including high reliance on oil revenues, and incomplete and non-sustainable social coverage in Azerbaijan's social protection financing, in addition to sustainability risks such as ageing of the population. We also examined the drivers of ageing-related costs and the factors that affect the long-term sustainability of social protection financing, and our regression analysis has shown that ageing and economic growth are critical in these areas. On the positive side, Azerbaijan has recognized the problems and raised retirement ages, increased revenue collection and improved the accumulation of national savings. The system withstood the pressures well, and according to the Accounts

Chamber, the SSPF can meet its revenue targets through its own collections until 2026. Furthermore, spending remains in line with targets and is funded without recourse to buffers [40]. Further reforms will probably be needed for sustainability in the long term, such as gradual increases in the effective retirement age again (and possibly above 65 in the very long term), further diversification, and changes to the link between benefits and economic developments, if necessary.

Proposed Model / Recommendations: Based on the analysis, a model can be proposed in which the three-pillar system would be constructed sequentially, the first pillar assuming the form of a pay as you go public pension scheme and only then being complemented by a mandatory second pillar once the financial system is sufficiently developed. The development of the third pillar of private and voluntary pensions could be helpful, as would a rule-based transfer from SOFAZ to the SSPF that would create more predictable financing (for instance, transferring a certain percentage of oil revenues into a Pension Reserve sub-fund on an annual basis). Money in such a reserve could be drawn upon in years when contribution income is too low (automatic stabilizer). It is also recommended that gradual adjustment in the link between contribution and benefit (which Azerbaijan has started since the 2006 reform with the introduction of the concept of individual accounts) should be sustained. Strengthening that link would improve equity (since people are more willing to contribute when they know they will receive the same benefit) and reduce the inefficiencies of the disability system (potentially in particular by supporting rehabilitation and return-to-work for people able to do so).

Overall, Azerbaijan's social protection system has expanded rapidly, and the system now must be consolidated in order to be sustainable into the future. The evidence provided by econometric forecasts and financial projections suggests that sustainability is compatible with spending the surpluses in good years, adjusting parameters in response to demographic developments and broadening the contribution base. To estimate what share of GDP will be needed for social protection, policy-makers can plug reasonable estimates of future old-age proportions and GDP per capita for 2030 or 2040 into this model equation and set their policy accordingly. However, by proactively adjusting to future pressures on the social protection system, such as through a higher retirement age and the promotion of a non-oil economy, Azerbaijan can avoid the above-mentioned financing pressures and the social protection system will fulfill its functional role and provide security to the population.

CHAPTER III. STRATEGIC APPROACHES TO OPTIMIZING THE EFFICIENCY OF SOCIAL SECURITY FINANCING IN AZERBAIJAN

In the chapters above, the current model and problems of financing Azerbaijan's social insurance system were studied in depth. There, it was revealed that the current financing model on which the formation of the system is based is experiencing problems. The analysis also highlighted that, without long-term planned improvements to the system, the system could be unsustainable, and therefore a forward-looking approach is being taken. The financial sustainability of the social security system can be strengthened through diversifying where funds come from and the introduction of creative new funding mechanisms. This chapter reviews the approaches to result-based budgeting and actuarial projections in the spending of funds, as well as providing detailed recommendations for reforming the policy framework to ensure contributions into social security systems remain sustainable over the long term. The proposals made throughout this chapter directly follow on from the conclusions of the analysis carried out in Chapter II, above.

3.1. Development of alternative financing tools and diversification of revenue streams

As mentioned in chapter II, the Azerbaijan social security system has a narrow revenue base. The main source of income for the social protection system is the social insurance contributions of employers and employees, followed by the state budget. A narrow revenues base has left the system vulnerable to macroeconomic trends and increasingly reliant on transfers through the central budget. Analysis shows that direct transfers from the state budget have covered almost a fifth of the revenues of the State Social Protection Fund in the last few years, leaving it highly dependent on the central budget. The above structure is not sustainable during times of economic slowdown or weak oil revenues, as it shifts the largest portion of the burden to the state budget. How can Azerbaijan expand its eligibility for social security financing without placing too heavy a burden on any one source? One possible answer is to develop complementary financing tools to spread the costs across the whole economy and to diversify the financing through the development of financial instruments, which would enable more resilience and efficiency in financing.

One critical step in addressing this issue is identifying the weaknesses in the current funding system and possible areas for diversification. Table 3.1.1 presents the main findings of Chapter II regarding the current funding system and the areas to address identified weakness in the funding system. For each one of the Problems identified and discussed within this section, there are Solutions that address the respective problems through alternative financing or

diversification options. This creates a clear and evidence-based link from Problem identification to the proposed Solution.

Table 3.1.1. Key findings from analysis and strategic focus areas

Key finding (Chapter II)	Implication for financing	Strategic focus area
Financed mainly through mandatory payroll contributions, with limited alternative revenues.	Vulnerability to economic and employment fluctuations as income declines when formal employment or wages are low.	Move revenue sources away from payroll to investment income, alternative taxes, voluntary schemes, or solidarity schemes.
Social security is largely funded by transfers from the states (≈20% or more).	Heavy reliance on government budgets and concerns about the fiscal sustainability of government finances.	Create self-financing schemes such as reserve funds and social bonds to minimize strain upon the state budget while maintaining their benefits.
Self-employed and informal workers have low rates of participation in the contribution system.	Few contributors, and unrealized potential revenue, as some benefitting paid no share of costs.	Broaden coverage, perhaps through incentivizing or mandating informal workers and self-employed people, possibly through simplified schemes or subsidies.
The fund's assets and reserves return minimal investment income.	Missed opportunity to expand resources; fund is not using financial markets to compound growth.	Invest conservatively excess funds and reserves, earning higher interest rates with a strong focus on risk management.
Core revenue volatility, which is a function of the oil-driven economy, affects jobs and wages.	Economic shocks can depress contributions; system lacks cushion during cyclical downturns.	Establish stabilization mechanisms (e.g. contingency reserves, diversification into other sectors' contributions and/or rainy-day funds).

Source: The table has been compiled by the author.

It steers policy, with each problem above (Table 3.1.1) leading naturally to a recommendation. Since payroll tax is its main revenue source, the system is sensitive to employment trends. New revenue sources would therefore be desirable. Its heavy dependence on government funding also requires self-sustainability assessments. Likewise, the following table illustrates that diversification is not an end in itself, but a response to very concrete issues. Each of these proposals builds upon the problem addressed above, and a calculated area will be outlined for each of these proposals. Some specific proposals for creating a more efficient and strong financing system for social security will be dealt with at a later stage.

One avenue for diversification is broadening the contribution base. A large proportion of Azerbaijan's working-age population, particularly informal workers or those self-employed in micro and small enterprises, make little, or no, contributions to the social insurance system (SIS). As was described in Chapter II, a considerable number of people employed in the

informal economy are not in social security coverage but are receiving some other transfer or are eligible for social assistance or a pension. This is a potential source of distortion of the benefit principle and a potential source of additional finance. Thus it may be possible for government to phase in greater coverage, perhaps by instituting a simplified contribution system with lower rates of contributions and more flexible intervals for the self-employed, or by offering informal employers a tax deduction or a simplified process for registering their workers in the social insurance system. The more universally the program is designed, the more the cost is diluted among different segments and the less the burden on any single segment. However, the problem of the informal sector's integration has to be solved. What would provide incentives to have informal workers contribute to the social security? This could be accomplished by a carrot and stick strategy involving reduced barriers and costs to entry for smaller participants and heightened enforcement for larger ones. Since new participants would bring in more revenue, this would keep the system solvent in the long run and reduce volatility by increasing the proportion of people contributing to the system.

The contribution base can also be widened. One avenue is to diversify the sources of financing generated outside the customary employer/employee contribution, such as through the issuance of social bonds. Social bonds are debt instruments issued by the government or a government-sanctioned entity that are used to raise capital to finance social programs. Investors provide up-front capital that either covers current social security liabilities or funds new projects in exchange for the government paying the investor back in installments. Essentially, borrowing future assets to pay for today. A well-constructed social bond program in Azerbaijan could be used to cover short-term funding gaps or pay for one-off structural reforms, e.g. seed capital to create a pension reserve, without putting pressure on the state budget. However, bonds are not free money: they are essentially loans that come with an obligation to repay the borrowed sum. Their advantage is that they allow for repayment over a longer time span and can tap into private sources of capital: international development funders or social impact investors. If bond proceeds financed investments to improve efficiency (for example by financing information technology systems to reduce fraud or training that would strengthen employment outcomes and future contribution rates), such investments could be self-financing.

Another complementary strategy is the sovereign social fund or sovereign social reserve. In this case, some of the contributions are invested to generate investment income for the fund. A widely cited example is Azerbaijan's State Oil Fund (SOFAZ) which invests oil revenues for the next generations. The same could be done on a smaller scale within the pension system. As noted earlier and in chapter II, the return on the invested revenues of the State Social Protection Fund is at a low level, which means that most of the revenues collected are paid as

pensions; only a small share can therefore be amassed. Gradual investment of a portion of funding could prolong the future sustainability of Social Security. During years when payroll contributions exceed benefit costs (in other words, during years of annual budget surpluses), revenues could be deposited in a Social Security Reserve Fund. The fund would be professionally managed and invest in low-risk, secure investments. Over time, the compound interest earned on these investments could be a substantial source of additional revenue. This serves a dual purpose: first, it broadens the revenue base (contributions and taxes are not the only source of revenue), and, second, gives the government a reserve to draw on when there is a drop in contributions. On the other hand, a government would have to have good governance for the fund not to be mismanaged, and an investment strategy would need to be established with conservative guidelines related to the safety and liquidity of the underlying assets, given the nature of social security money. Some countries already do this successfully, such as the Canadian Pension Plan Investment Board that invests its contributions on international markets. Azerbaijan can start taking small steps in this direction, learning from the international experience.

Further diversification may arise from other, non-payroll, tax revenues set aside to fund social security. This is often presented as being superior to increasing payroll taxes that may have negative effects on employment or competitiveness. Another possible example would be directing a small share of VAT or excise taxes on luxury consumption towards the social security fund. Some countries already use a form of sin tax (tobacco, alcohol, etc.) to finance social expenditures, establishing a link between public health and social expenditures. In case the tax base in Azerbaijan is expanding (for instance, through a tax on natural resource extraction profits or taxes on certain consumption goods), a part of the resulting revenues could be transferred to social security to lessen pressure on payroll taxes. Table 3.1.2 presents the current social security financing mix in Azerbaijan according to the most recent data available from the social security Treasury, as well as an illustrative future financing mix that could be achieved if the alternative financing measures outlined in the rest of this section are successfully implemented.

Table 3.1.2. Current vs. diversified revenue mix for social security financing

Revenue Source	Approximate current share (2025)	Possible future share after diversification (2030)*	Explanation of change
Payroll contributions (employers & employees)	75–80% of total funding	60–65% of total funding	Reduced in share, not necessarily in nominal size. In other words, they expect payroll contributions to this system to continue to grow, but not as quickly as other contributors, such that payroll contributions comprise a slightly smaller fraction. This frees up labor, but is dependent on collective contributions, or dividends, from the total workforce.
State budget transfers	20% of total funding	10% of total funding	Greatly reduced reliance on direct government subsidies. When other forms of self-financing are available (a reserve fund, bond, other instruments etc.) the need for state subsidy to cover such shortfalls can be reduced. The state can then use the money for other purposes, or specific items like legacy pension liabilities.
Investment income and reserve fund drawdowns	1% (negligible currently)	10% of total funding	Part of this increase may result from the formation of a reserve fund and the long-term investment of some of the reserves, which through the effect of compounding could contribute an important portion of the pay-outs in prosperous times.
Alternative dedicated taxes (e.g., VAT, "sin" taxes)	0% (not used currently)	5% of total funding	Most countries also supplement social spending with small fractions of other taxes, such as 1-2 percentage points of VAT or excise taxes. This reduces reliance on payroll taxes and attaches social funding to broad economic activity, not just labor income.
Voluntary contributions (supplementary pensions or private schemes)	0% (very minor currently)	5% of total funding	New source growing. The promotion of voluntary retirement savings or of private pension funds that complement the state system can also mobilize additional resources. Over time, part of these retirees will have their pensions partially funded out of private savings, which will in effect ease the burden on the public system, leading to increased revenue.

Source: The table has been compiled by the author.

The present system, shown in Table 3.1.2, is funded at least three-quarters by payroll contributions, with most of the rest financed through government funding. Income from investments is small. In a diversified scenario (for example, 2030 as indicated in Table 3.1.2), this dependence on payroll contributions would change. In a diversified scenario, cash from payroll contributions would continue to be the largest share of the overall funding source, but it would drop to 60%-65% of the total. It does not arise from a contraction of the payroll tax base but rather from a growth in other sources of revenue. Ideally, the share of state budget transfers would fall to around or below 10%. The system would be much less dependent on public funding. With the establishment of a reserve fund and its investment of the social security assets, the share of investment income could potentially increase to around 10%. This is somewhat aggressive, but not impossible if a reserve fund is built up over the years and earns interest income to pay a share of the annual pension outlays along with taxes or other levies that are dedicated to the pensions, i.e. not simply payroll taxes. Finally, the last bar shows voluntary contributions, still small but increasing. Some individuals may be saving in the supplementary schemes, possibly as a result of tax incentives or state matching contributions. Of course, the starred scenario is merely an example, and the future outcomes will depend on economic growth, schemes adopted, and the efficiency of the implementation of new initiatives. Even this simple model shows that Azerbaijan's financing balance could be much better diversified by 2030. This would be good for financial sustainability: if one source of financing fails (for example, payroll contributions fall as a result of a downturn in the economy), other sources are likely to be less affected and would pick up the slack.

Alternative sources of revenue are alternative sources of financing. One alternative is to assign part of VAT to fund social security. This requires a change in legislation, and it needs to be calibrated, so as not to starve the rest of the budget and displace other, productive expenditures. The creation of a fund for stabilization purposes also implies making the decisions about how much should be amassed, when to spend the fund and who should administer it. The Azerbaijani authorities need to think through all the possible tools, considering the structure of the economy. One key factor is that during oil boom periods, saving a reasonable share of the windfall (whether directly or through the Oil Fund) would provide an important supplement to the reserves. This would, in effect, turn finite oil resources into a permanent social insurance policy, as discussed above. Yet another argument for at least partial earmarking of part of the resource revenues for social security is that social security funding is human capital funding, and social stability funding. It may be more intuitive to save some of the people's oil wealth for people's social security needs, after the oil runs out and/or after they age. Several countries with

SWFs partly achieve this by directing part of their return on investment to a special fund for pensions, and if Azerbaijan could have achieved this then it would have achieved diversification of funding and a reduced risk of future pension payments.

There are other financial instruments that have similar effects but come with other trade-offs: social bonds (which increase the level of debt), social security funded from tax revenues (which limits the general budget), or reserves that expose the government to market risks. Risk management is key. Diversifying by nature spreads risk (which is good - not all eggs in one basket) but needs to be managed to avoid concentrating unnecessary risk. For example, a reserve fund invested almost entirely in the stock market will lose the most value at the time of greatest need (too much risk). One way to avoid this would be to create a more conservative investment mix, investing more in bonds or very diversified global investments, at least in the early stages of building up this fund. If issued, the social bonds could be repaid from a clear and credible plan that describes how repayments would be based on improvements in future system finances (e.g. a share of future contribution growth or budget savings).

On the positive side, because these reforms address the weaknesses identified above, the system will be more resilient because the fiscal base will be broadened, thus allowing it to cope better with shocks. A further advantage of this system is that even if there is a temporary increase in unemployment, and there is thus a decrease in payroll contributions, then the reserve fund, or some other tax (such as value added tax, which is less affected by the level of unemployment), can be used. This has the advantage of improving efficiency, because it allows money, which is less disruptive to obtain, to be found where it is most easily accessible. This means those strategies create a buffer and flexibility, as opposed to fixing issues when they emerge under financial pressure.

These alternative methods of financing, which will be relied on increasingly, will require periodic review. After the initial widening of the revenue base, other technical problems will arise, for example the question of the reserve fund or of private pensions and the public pension system. It also suggests that diversification is a long game, and the authorities need to have a long-term view about policies which, over time, may need to be adjusted, so that there is a good interaction across the instruments included in the financing mix. In simple terms, more diverse revenue mix makes sense. And a stronger foundation helps move on to the next stage: using every manat collected in the most efficient way to achieve the social security goals. One cannot just raise more money. A high level of revenue is of no use if it is inefficiently spent. Next in line is the expenditure and management of social security funds through result-based budgeting and actuarial planning in such a way that the system is not only well funded but also well run.

3.2. Application of result-based budgeting and actuarial planning in social security programs

Finding sufficient and diversified financing is only one part of the problem. The other aspect is ensuring that public funding is used effectively in pursuit of social goals. As discussed in chapter II, there are also important issues on the expenditure side as regards the way public resources are currently used. Historical analysis also showed that the process of determining the Azerbaijan social security budget had been implemented on the basis of input budgeting, that is, setting fixed amounts of resources to programs that were based on historical levels or overall targets, rather than results or outcome-based budgeting. For example, the pension payments to retirees, unemployment benefits, and social assistance payments to social welfare recipients are determined by the number of beneficiaries and in accordance with applicable legal acts, rather than on the basis of the results of the expenditures. Now, and the above is not just going to be a matter of balancing budgets on a year-to-year basis. Particularly, how are we doing on a 5, 10 or 20-year view as far as our financial situation is concerned, particularly given the demographics? That's also where result-based budgeting (RBB) and the actuarial perspective could provide real value in terms of increasing efficiency and sustainability.

A further approach is result-based budgeting (RBB), which links funding with the production of results. RBB seeks to replace the question "How much money does this program need next year?" with "What does this program aim to achieve, and what resources does it need to achieve it effectively?" In social security, the "results" can include achieving a lower level of poverty for pensioners, a higher satisfaction level of beneficiaries or a wider coverage of risk groups. Less direct results may include a higher level of formal employment resulting from a better provision of unemployment benefits. Finding such results would allow us to prioritize better which programs to fund in a way that does the most good, and to find ways to eliminate inefficiencies. For example, if we considered all the programs in Azerbaijan as social security, (older age/pension, disability, unemployment insurance, and poverty-targeted social assistance), we'd need separate goals and indicators for each. An example might be that the objectives of a pension system are that it provides a decent replacement rate (e.g., average pensions are at least, say, 40-50% of average wages) and that it is sustainable. The measure might, then, be whatever the average replacement rate was or the share of pensioners living above the poverty line. If it is to be argued that further budgetary impact will be required, the case will need to be made that this action will improve on the budgetary outcomes here (including indexation to increases in the cost of living and, thus, the replacement rate). Otherwise, if the program is not fulfilling its intended purpose, the RBB approach provides an

answer to whether the money should be reassigned or whether circumstances should be changed.

For social security, RBB requires better data collection and analysis, as well as a different culture for managing public finances: ensuring that public officials and program managers are focused on results, not just expenditures. Table 3.2.1 provides a model set of KPIs for the different branches of social security, showing what result-based budgeting in the social sectors could look like. Below are the current values (hypothetical or average of most current data) on these KPIs and the targets set. This is the essence of result-based budgeting: setting KPIs that the government should be working towards and then tracking progress on the KPIs over time toward those targets.

Table 3.2.1. Key performance indicators for social security programs (illustrative)

Program area	Example KPI	Baseline (recent)	Target (future)	Notes on significance
Pensions (old-age)	**Average pension replacement rate** (average pension as % of average wage)	40% (current est.)	50% in 5 years	High replacement rates indicate adequacy of pensions, that is, a retiree is better off than the working population. It has to be achieved without compromise with sustainability, hence a gradual target.
	System dependency ratio (number of contributors per pensioner)	3 contributors per pensioner (est.)	Maintain ≥ 3 or slow decline to 2.5 by 2030	This is an indicator of sustainability pressure: a falling ratio indicates fewer contributors for each beneficiary. Actuarial planning attempts to relieve this pressure through policy modifications (e.g., retirement age), with the goal of preventing this ratio from falling sharply.
Unemployment insurance	**Coverage rate** (% of unemployed receiving benefits)	30% (many unemployed not covered)	50% in 3 years	The program is described as inclusive because many unemployed people do not obtain unemployment assistance (due to eligibility requirements or low funding), and more money or looser requirements enable more

				jobseekers to be assisted with their job search.
	Re-employment rate (% of beneficiaries who find jobs within 6 months)	45% (estimate)	60% in 5 years	It is measured by how well unemployment assistance and job programs are doing, or whether most people quickly move out of unemployment, which may justify investing in job placement.
Social assistance (poverty-targeted)	**Poverty impact** (reduction in poverty rate due to assistance)	Poverty rate 8% (with assistance)	5% poverty with improved assistance	This measure evaluates the extent to which social transfers reduce poverty. If current spending results in a poverty rate of 8%, a goal could be a poverty rate of 5% either by increasing benefits or coverage. Resources would be allocated to maximize this impact.
	Leakage rate (% of assistance going to non-poor in error)	15% (estimate)	<5% in 2 years	Indicates efficiency and targeting accuracy (lower is better). Lower leakage means the program is well targeted (fewer ineligible people getting benefits). Therefore this may require better means-testing and data cross-checks, which can cost money on detection systems.
Disability benefits	**Benefit adequacy** (average disability benefit as % of minimum cost of living)	70% (current)	85% in 4 years	Ensures that recipients with disabilities can meet basic needs. If the level of adequacy is to be increased, this may require additional or reallocated funding if the budget is underfunded.
	Processing time (average time to process disability claims)	60 days	30 days in 2 years	It assesses the quality of administrative services delivery. A shorter processing time means better services. This may mean investing in digitalization, which may require an upfront cost,

				but this can be justified using an RBB.

Source: The table has been compiled by the author.

Table 3.2.1 sets out a wide range of possible KPIs for a result based budgeting system. These would correspond to each of the program areas (pensions, unemployment, social assistance, disability, etc). The most common outcome indicator of pensions is the replacement rate. An increase in a pension budget increases the average pension relative to wages, improving the well-being of retirees, but a rapid increase threatens the pension's sustainability. This is why the system dependency ratio, which is a secondary indicator in actuarial balancing, is also being monitored. You would probably not want to simply keep that ratio constant (by raising the retirement age or increasing the labor-force participation rate) to ensure that in 2030 you have at least 2.5 contributors for every pensioner, as in the demographics it may not be possible. For unemployment insurance, you would not write a benefit budget but a coverage budget, in the sense of how many unemployed persons it would cover and how fast it would help them find a job. If coverage is low (say, covering only formal sector workers), then the budget would be used to cover more of the unemployed persons (say, at least 50% of them). Another way to avoid this waste is to increase the speed of return to work (for example through provision of job training, better job matching services, which can be financed by the unemployment fund). The underlying assumption is that social assistance payments aim at poverty alleviation. In other words, any increase in expenditure would be associated with a proportional decrease in poverty incidence amongst beneficiaries, while ineffective programs would lead to no such decrease. One of the aims of the RBB was to reduce leakage and poverty impact rates. If leakage is reduced from 15% to well below 5%, we have become more precise - for example because of improved data collection systems or more careful monitoring. RBB would be supportive of any improvement towards this goal. Finally, whether disability benefits are adequate and timely is measured. These are not fixed targets, but can be considered as examples of commonly cited policy purposes that would need to be delivered in the financial budgeted context, such as investing in new case management enterprise-level software to reduce case processing times, increasing benefits to more adequate levels over a number of years. RBB seeks to articulate these linkages between policies and outcomes for the purpose of accountability. In this way, the government provides parliament, the ministry of finance, and the general public with information that illustrates the value for money achieved in terms of outputs (money spent and number of beneficiaries served) and outcomes (improved living standards, reduced poverty, and effective delivery of services).

Thus, in order to introduce result-based budgeting into Azerbaijan's social security administration, the service should upgrade its data collection and database management capacities. In addition to this, wherever the results to be achieved cannot be measured, it is possible to combine two different databases, for example, employment data and the social insurance database to assess re-employment or household survey data to assess reduction in poverty resulting from benefit payments. Active digitalisation initiatives (like the DOST agency's modernized registry systems mentioned in the context of Azerbaijan's social protection digital reforms above) will secure the capacity to collect real-time information. Staff training for programme managers is important to move from the principle of "spend and report" to a more proactive "plan, implement, and achieve" approach. This might be new and there are some who resist it. For much of the last 40 years, the default might be to do what was done last year plus some percentage. But they should be encouraged to consider budgets and justifications in terms of their impacts. RBB could be gradually rolled out through pilot projects. An example of a pilot project might be to test RBB on one social security fund, for example the unemployment insurance fund, or a specific social assistance scheme, for a period of a couple of budget years.

As well as result orientation, the other pillar of financial sustainability is actuarial or financial planning. Unlike RBB that focuses on short- and medium-term efficiency and effectiveness, actuarial planning is interested in longer-term financial equilibrium and sustainability. In social security, actuarial planning means the projection of the financing of the system using demographic and economic assumptions and the use of such projections for policy-making purposes. For instance, an analysis of the pension scheme would typically include an estimated ratio of number of retirees versus number of contributors, say in two decades from now. This projection is based on expected future developments on demographic aspects, future benefits and the adequacy of current contribution rates to cover expected future benefits. Some possible outputs of the projection exercise are the funding ratio, the plan's long-term surplus or deficit, and the effect of policies such as increasing the retirement age, modifying the contribution rate or changing the indexation of benefits. As Chapter II found, Azerbaijan's social security framework, most notably its pension system, is under pressure from an aging population. Azerbaijan is not aging as quickly as many other European countries, but life expectancy is increasing while birth rates are declining, which will mean a larger proportion of an aging population overall. Depending on the actuaries' assumptions, the pension fund may eventually run a deficit (that is, contributions and/or the value of the trust fund are exceeded by pension benefits), requiring either a larger increase in the budget transfer or a reduction in pensions or pension increases (benefits). But factors such as migration (young workers moving

elsewhere) or economic conditions (growth in wages) can impact those estimates considerably in the future.

Actuarial planning seeks to avoid these problems by providing demographic and financial models so that policymakers can see problems coming over the hill before it is too late. For example, an actuarial study might observe that the ratio of contributors to pensioners will fall beneath 2:1 by 2035, or that the pension fund is on target to run an annual deficit of such-and-such percent of GDP. In this case the government can make small changes: it can gradually increase the retirement age, change the formula by which it calculates pensions, or raise the contribution rate by a small fraction. Making changes in small periodic increments rather than creating a large deficit to be resolved by large cuts or large increases in taxes makes much more sense. Efficiency-wise, actuarily sound decisions are thought to be preferable to ad hoc insurance design, because they should be based on more analysis, modeling, financial discipline, and planned planning.

Table 3.2.2. Actuarial projection of pension fund finances (2025–2040)

Year	Contributors : Pensioners (system dependency ratio)	Fund balance without reforms (% of GDP)	Fund balance with reforms (% of GDP)	Notes on reform scenario assumptions
2025	3.0 : 1 (current)	Balanced (0% of GDP)	Balanced (0% of GDP)	Starting point. About three employed workers for each retired worker in 2025. The fund is close to balanced, with state subsidies making the difference, but there have been no deviations yet.
2030	2.5 : 1	Deficit of 1.0% of GDP	Near balance, 0.2% deficit of GDP	If no changes are made the ratio of contributors to pensioners is expected to fall to two and a half to one. Even considering this, the state will have to make up the difference of an estimated 1% of GDP to fund the notional account. The gradual increase in the retirement age by 1 year and the improvements in contributions' collection should offset these effects.
2035	2.2 : 1	Deficit of 2.5% of GDP	Deficit of 0.5% of GDP	No reform: future contributors will have to contribute for more pensioners, adding to the deficit. Reform: future contributors will contribute for fewer years, and a slightly higher share of people

				working into older ages (shown by previous reforms yielding more labor-force participation among women and seniors). The pension reserve fund also pays a share.
2040	2.0 : 1	Deficit of 4% of GDP	Surplus of 0.5% of GDP	Without reforms: In 2040, with the old-age support ratio of 2 (two workers for each retiree), the difference between what can be collected and paid out will be huge, even if the contribution is as high as 4% of GDP. With reform: Some reforms, such as raising the retirement age to 67 for men and women, may have occurred. Contribution collection rates are high among all sectors. The investment income and the reserve fund cover a large share of benefits. This results in a modest surplus, implying a sustainable system.

Source: The table has been compiled by the author.

In order to illustrate the associations and the importance of actuarial projections, Table 3.2.2 presents a simplified projection of the pension system. It shows the actuarial projection of the fund balance of the pension system over a 15-year period, under two scenarios: a "no reform" scenario, where no major policy changes are introduced, and a "reform" scenario where some of the proposed policy changes (diversified funding, minor increase in the retirement age, etc.) are implemented. The table shows the system dependency ratio, the state of the fund (i.e. the surplus/deficit of the fund as a percentage of GDP) and, if needed, the amount of state transfer. This illustrates how a different choice of policy may dramatically change the long run trajectory of the social security fund balance.

Meanwhile, Table 3.2.2 tells two very different stories for pensions in social security: in the baseline "no reform" scenario, the old-age dependency ratio is projected to deteriorate from 3:1 to 2:1 over 15 years, which is normal in a rapidly aging population. As such, without reforms, the pension fund would either have to receive an increase in funding of 2.5% of GDP in 2035, and almost 4% of GDP in 2040 to remain solvent. Given the long-term nature of the fund and these numbers, this is unsustainable under the system's current structure. As contrasting, the "with reforms" scenario above shows what happens if we include some reform measures. The main reforms in this scenario are (i) further gradual increases in retirement age beyond the currently planned 65 (e.g. to 67 years by 2040 but very gradually so as not to shock the system), (ii) better contribution collection, to increase contribution revenues (through the

measures listed in section 3.1 which would include more contributors and higher income), and (iii) the gradually increasing contribution of the returns from a reserve fund starting in the 2030s (still being built up in the early years but disbursing the earnings in the late 2030s). If necessary, this could be coupled with a gradual cooling of the growth of benefits (for example, CPI indexing instead of wage indexing for a period of time). By 2040, these measures should be sufficient, not only to avoid disaster, but to put the system slightly into surplus so that, if desired, it could either reduce its call on the state or increase benefits. The strength of such an exercise is that it is future-looking. It shows the policy-makers what to aim for and what to change to help achieve such targets (such as keeping the deficit relative to GDP no more than 1% at the worst) by changing the retirement age, contribution rate, funding method, and so on. Through such actuarial analysis, the social security administrators in Azerbaijan can identify a looming crisis and turn it into a healthy opportunity to strengthen the system in place.

Azerbaijan had acknowledged the importance of long-term planning and had worked towards it with the Pension Reform Concept of the early 2000s and amendments to social insurance, which introduced individual accounting elements and a program-oriented approach to achieve financial sustainability. Nevertheless, these projections should be regularly updated. Ideally, an actuarial review would take place every 3 years or on the occasion of a major change of key demographic parameters. International good practices, such as those of the International Labour Organization (ILO) or the International Social Security Association (ISSA), recommend establishing an in-house actuarial unit within the State Social Protection Fund or the Ministry of Labor and Social Protection that run scenarios continuously and provide policy advice on necessary updates. Some countries also incorporate such long-term considerations in their budget process, depending on the country, by requiring any recommendation to increase benefits or reduce contributions to be accompanied by an actuarial estimate describing the longer-term effects. Azerbaijan might see such a requirement as a step towards an actuarially based approach to policy-making in social security.

Stress the interrelationship of result based budgeting and actuarial planning. Both are two sides of the same coin and must be balanced in terms of short-term efficiency and long-term solvency. When RBB suggests a program is not achieving desired impact, it may suggest shifting funding from that program to one that is achieving desired impact. Actuarial analysis can tell us whether a reallocation, such as more money for social assistance and less for something else, increases or decreases the future obligations. If an actuarial analysis argues for increasing the retirement age, RBB can ensure any savings are converted for other uses, such as increasing benefit levels. Both foster an environment of informed evidence-based policy making, as well as avoiding wastefulness or improvised responses to fiscal conditions. These

two tools should allow Azerbaijan not only to sustain the financing of its social security system, but to improve its social return per manat spent and secure it for generations. With this funding framework in place, we can now provide concrete suggestions for policy changes and reforms that will allow alternative funding, proper budgeting, and sustainable financing to put us on a path towards long-term financing sustainability.

3.3. Recommendations for policy reform and financial sustainability in the long-term development of the system

While we have already pointed at a number of options for improving new revenues and budgetary developments, the report here will provide specific recommendations so that Azerbaijan's social security system becomes and remains more efficient and sustainable for decades to come. Chapter II identified the narrow resource base, the heavy reliance on state funding, the potential inefficiencies in resource allocation and use, and the demographic pressures on the social security system. In sections 3.1 and 3.2 we identified some possible sources for diversification and some management tools. Now that we have those proposals, we will suggest some reforms relying on one or more aspects of our analysis in the preceding sections. They try to remedy the problem or fill the gap mentioned. Some recommendations involve parameters of the system (such as age, contributory period, contribution and benefit rates) while others involve systemic and structural changes (such as new institutions or mechanisms). Others are for improved governance and process. These recommendations are all interrelated and will be described separately.

A more general recommendation is to gradually move towards a multi-pillar system (i.e. with one pillar of a fully funded or privately managed component in addition to a basic pillar, which in the case of Azerbaijan is a public pillar), rather than relying on the state-run mandatory insurance system almost exclusively. The pillar can also be a voluntary or mandatory funded scheme or a social assistance pillar (to provide a safety net for poverty). The rationale of Chapter II is that the whole pension scheme is exposed to risks if it is dependent on one pillar. Targeting the second pillar, by assigning a fraction of current income savings to privately managed personal retirement accounts, could help to ease the future burden. Azerbaijan has considered and even discussed a mix of this sort to introduce some more funded content to its pension system; nothing has yet materialized. There must be a new properly funded supplementary pension scheme. This would be offered voluntarily at first, with incentives to save, perhaps in the form of tax relief on savings or a small government matching contribution. After a while, if it was a success, it could be done on a quasi-compulsory basis for young employees, so that after around 20-30 years it would be a major source of retirement saving alongside the state

pension, and future retirees would need less from the state fund. That is a long-term reform and needs strong safeguards (to protect savers' money and at least ensure a decent return), but it also addresses a major problem: that if everyone opted out of the public system, it would be bearing all the costs. It also provides a stable source of future pension financing alongside the diversification of 3.1 in the form of "voluntary contributions".

The other main recommendation relates to parametric changes to achieve sustainability, as small changes, as has been discussed above, can have a large impact on the actuarial balance in the future. Therefore, it is wise to continue raising the retirement age based on life expectancy. Azerbaijan is already on a path to 65 for both men and women, with the retirement age increasing gradually until around 2026 for women. Because life expectancy will likely improve, this means that the age of 65 could by the 2030s, for example, be relatively lower than it is today. It may therefore be appropriate for policymakers to periodically, perhaps every 5 years, review the retirement age against demographic trends. If life expectancy, and healthy active life expectancy, are increasing, the retirement age may increase by several months or a year to maintain the ratio of retirement years to working years about constant, to stay fair between generations. In the face of political opposition from older voters, the increase in retirement may have to be gradual and carefully explained as necessary to keep the system fair and solvent for young as well as old. Other parametric adjustments may also be needed. If a permanent gap is identified, then an increase in the social insurance contribution of 1 to 2 percentage points (possibly shared between employer and employee) could be phased in. This should only be a last resort, as higher payroll taxes discourage employment; it is better to broaden the tax base (which we already recommend). The second parameter is benefit indexation, for which the best practice would be formal indexation of benefits between adequacy and affordability. For example, a pension that is indexed to inflation preserves its purchasing power, but if affordable could be indexed less frequently or partially wage-indexed to allow retirees to share in economic growth. A simple, clear rule therefore prevents large, ad-hoc increases that destabilize finances. Chapter II likely records how discretionary increases at election times or in oil boom years helped pensioners, but drained the fund. Instead of variable increases, stable rule-based indexation could be smoother and more predictable, as it would avoid sudden costs to the fund.

Sustainability also requires efficient administration, for example, by investing in the modernization of the administration of social security, so as to reduce administrative costs and leakage and keep the system affordable. Azerbaijan has pioneered certain areas of e-government (such as DOST centers offering integrated employment and social services). Potential savings and improvements to services could be made through further digitalization (integrated

beneficiary database, artificial intelligence to flag fraud / erroneous payments, digital services etc.) that could reduce the human resources and other costs of administering such programs. Consequently, such efforts to cut back on administrative costs may improve the system's efficiency ratio. In addition, an efficient administration is also better suited for the implementation of the result-based budgeting framework: data is easier to gather and performance indicators are easier to track and adjust. By creating a dashboard to increase social security accountability and transparency, releasing regular information on coverage rates, processing times, and financial status of the system, citizens may have better information which helps them understand and trust the system. Building that trust is critical if the government wants people to contribute more to social security or to wait longer for pensions. People need to have confidence in decisions and delivery. Chapter II might have noted that when poor people's contributions are wasted or taken from them and given to others, they will likely avoid making contributions and that good governance and transparency contribute to positive outcomes.

In addition to the institutional changes discussed above, some new law or policy will be needed to support the new financing tools. If a reserve fund is established (as section 3.1. recommends) the legislation will need to define the purposes of the fund, how it is replenished and how it is used. A good first step would be a carefully drafted "Social Security Reserve Fund Act", directing that a certain percentage of surplus above a certain level (or some other specified flow of income) be directed to the Fund, and that the Fund only be used for the purpose of the investment returns on the Fund, or only when the social security fund is in deficit by some specified amount in especially bad years. If proceeds will be used as social bonds, then structures will need to be put in place for a "Social Bonds for Social Welfare" policy, possibly using a sinking fund that uses a proportion of future contributions growth to pay out. This requires another change to the law, possibly to allocate x% of VAT income to the social fund. This could be done through annual budget laws, or through a permanent provision in tax law. In sum: the suggestion is that the idea of social security as a collective, society-financed fund become mainstreamed. With some of these written into law it cements the commitment and reduces uncertainty.

Given the interdependence of so many reforms, a timetable for implementation can be helpful. Trying to do everything at once is overwhelming. Some things must be sequenced. Table 3.3.1 gives an indicative timetable for the introduction of key recommendations in short, medium and long-term action plans. The timetable takes into account the urgency level, the complexity and the sequencing of the actions. For example, building the capacity to implement result-based budgeting is essential before scaling it up, and the establishment of a

legal framework is a prerequisite for issuing bonds. This enables Azerbaijan to stage reforms and achieve a successful transition.

Table 3.3.1. Phased implementation plan for social security financing reforms

Timeframe	Recommended actions (policy reforms & initiatives)	Objectives and justification
Short-term (1–2 years)	- Launch a formalization campaign: simplifying registration for small businesses and the self-employed, providing mild penalties for noncompliance, and conducting awareness campaigns.	These immediate steps address the gaps identified in Chapter II and expand the contributor base early. Even a modest reserve fund shows dedication to future growth (and diversification). A tax earmarked in the next budget creates new, permanent revenue once the budget is enacted. Pilot RBB and actuarial task force build the internal capacity to ensure that larger efforts are based on evidence and staff can carry them out.
Medium-term (3–5 years)	Set up a pilot Social Security Reserve Fund: invest a surplus or small fixed share of payroll taxes at the end of each year in a safe account with an investment committee and basic rules.	But this is also the time when the less palatable measures come into play, such as the gradual increase of the retirement age, as opposed to more sudden jumps. In a system of Thorough Results-Based Budgeting (RBB) well in place, every manat in the budget would need to be linked to an expected result. Efficiency would thus be institutionalized, and the voluntary funded pillar would slowly start paying off. If issued, social bonds would provide mid-term funding for reform costs or their fiscal deficits, until other changes have come into effect. Digital reforms are embedded in every reform for easier implementation and RBB data tracking.
Long-term (6–10 years and beyond)	- Create a tax earmark: for example by allowing the next budget law to allocate 1% of VAT revenues or part of oil revenues to the social fund.	The long-term is a phase of consolidation and robustness, so it's not just about implementing improvements, but also about assessing the results and sometimes adjusting some strategies that were established. If all goes well, even the second pillar might be reinforced further, and in the long term, the demands on the first pillar would be reduced. The retirement age would not be set by parliament but depend on life expectancy. Then the system would become fairer and more sustainable. The goal of universal coverage is twofold: social justice (everyone who will get benefits contributes according to ability) and maximizing

			revenues (by year 10 the enormous majority of the workforce is on the books). At year 10 you want to have this self-financing social security system where the state can afford to cover the people who have a need, freeing up the state's assets.

Source: The table has been compiled by the author.

Table 3.3.1 highlights both short-term (1-2 years) and long-term goals, with the short-term goals focusing on quick wins and the laying of foundations for future work. If contributions are formalized quickly, as happened here, this supports the early finding that much of the workforce is uncovered, and can also signal both a change in funding mix, with a reserve fund being created short-term and a tax marked soon after, and that the government is actually committed to the change. Testing RBB in small, controlled circumstances gives one the possibility to learn by doing: to get failures in a narrow situation so that the proven successes can be used. The Actuarial Task Force is the body responsible for the medium-term decisions (of how fast to increase the retirement age or whether to issue bonds).

In the medium term (in the 3-5 years that follow) deeper reforms will happen. By then the population will have seen the benefits of the previous stage (e.g. higher coverage, better services due to digital technology) and it would be easier to do things like raise the retirement age further. And not waiting too long means therefore that the increase in retirement age also happens in a much more gradual rather than shock way, e.g. for both men and women 66 by year 5 or 6. The expanded RBB means that the MoF and social fund apply it to big-budget items like the entire pension budget, which is hugely helpful for fiscal discipline and outcome orientation. If properly regulated so that the state checks that private sector money is protected and well managed to avoid scandals that weaken confidence, the voluntary funded pillar here could leave more people with private savings at the end of this period. We can issue social bonds if we need them. If we are keeping the deficit under control with other measures, then this may not be necessary, but there would be the option to do so if needed (to fund a one-off cost such as a large indexation increase to catch pension levels up to where they should be, or to build up seed capital in the reserve fund). Our medium-term investment is also in building digital and administrative capacity for all of the other reform measures (from contribution collection to RBB's key performance indicators).

In the medium term (i.e. 6-10 years from now, or later), we expect Azerbaijan to have a more substantial fund, additional pension adequacy, and higher confidence in the pension system. An independent review should be undertaken (possibly with the help of international evaluators or local auditors) to verify whether the new diversification strategy and budgetary

rules are achieving their targets. If data shows that the share of VAT that has been earmarked causes too much drag on the state budget, then either the share should be adjusted or a different source should be identified. If increasing the compulsory retirement age is politically infeasible, consider slowing increases to the normal pension age or introducing flexible retirement options (such as receiving a partial pension when partially retiring early). If voluntary pensions are not used, consider compulsory pension enrollment (where employees are automatically enrolled in a pension scheme and contribute a small amount to a private sector pension unless they opt out, has been successful in some jurisdictions to increase pension coverage without opting). Some structural goals must be reached by the tenth year (e.g. universal coverage, which assumes that enforcement and incentives have by then formalized almost all workers). Achieving a low share of state budget financing after 10 years may be ambitious, but if several things fall into place (higher contributions, returns from the reserve fund, partial second pillar buy-out), the social fund could then cover a large share of its obligations with minimal subsequent transfers from general revenue. That would be rather different from the situation in Chapter II, where budget financing of more than 20% was common. It does not mean that there would be no state involvement. Budget financing would be for legacy issues (the pensions of those who earned rights but whose contributions were never paid during the Soviet era, like many countries do, treated as a discrete state cost).

All of the above recommendations are interrelated. Therefore, they should be regarded as a package of measures, which would rely on political will and proper communication with the public. The government authorities must communicate to the population that this is a necessary preventative measure, so that everyone can enjoy a secure benefit in the present and the future. Countries may resist (who wants to retire later, or contribute more?), but they may also realize that they have no viable alternative: not even a low pension. It is useful to consult civil society. It may also be useful to start with a voluntary variant of the reform the country wants to implement (as was the case, for instance, with the second pillar). Other Eastern European countries offer important learning opportunities, as many of these countries had their first pension reforms in the 2000s and their second reforms in the 2010s. Azerbaijan can learn from those countries that have experienced the hazards of a rapid privatization of their pension system (for example Kazakhstan's first pension reform or a reversal in some Eastern European countries) or the advantages of gradual parametric reforms, as in Germany or Sweden.

Finally, it is essential to recognize that sustainability is not a one-time fix, but a method of thinking and committing (where appropriate) to transparency, regulating policy with evidence over time, and enshrining principles of broad-based financing, efficient spending, and intergenerational equity for the long term, as the system develops and matures. Transformed in

accordance with the recommendations above and implemented with care and persistence, Azerbaijan's social security finance system can thus be moved out of the state of vulnerability identified above and into a state characterized by a stable revenue base (many streams contributing), effective expenditure (money going where it achieves real social results), and resilience against future shocks (demographic or economic). Such a system will provide a safety net for citizens in case of such shocks as economic downturns and demographic changes, while not creating a burden on the country's budget. In summary, alternative financing, performance-based management, and good policy reforms on social security financing can set the stage for building a more efficient and sustainable social security financing framework in Azerbaijan. This is work that will continue, but the groundwork laid today with sound analysis, and a forward-looking approach, should set the social protection system up to serve the needs of both current and future generations, and to continue to play a fundamental role in the social and economic development of the country.

CONCLUSION AND SUGGESTIONS

The objective of the study was to analyze the financing of the social security system in Azerbaijan and to find out whether the current financing mechanisms will be able to ensure the sustainability of the system. This included analysis of the relationship between contributions and transfers from the state budget, the role of oil revenues, and the pattern of pension and social benefit expenditures. The effect of demographic ageing and economic growth on social protection expenditure has been the subject of statistical and econometric analysis, using, for example, regression analysis through SPSS, to study the correlation between the share of elderly population, the GDP per capita, and the level of social security expenditure in a country.

The statistics suggest that Azerbaijan's success in expanding social protection includes the growth of pension and benefit expenditures, with many beneficiaries receiving regular pension payments, social allowances and targeted social assistance. The indexation mechanism will protect social benefit levels from inflation erosion. The data suggest that the majority of public spending still goes to labour pensions, and the small portion of spending on social assistance for the poor, unemployment insurance and some small schemes. Social insurance contributions are the main revenue source of the State Social Protection Fund; state budget transfers are still among the major expenditure categories, financing historical obligations or minimum guarantees.

Regression and trend analysis both show that social security expenditure is systematically influenced by demographics and economic factors: a high share of the old-age population goes hand in hand with higher social protection expenditures as part of GDP. GDP per capita is positively correlated to social protection expenditure. This means that with population growth and aging, there will be pressure for the government to pay more pensions and other social benefits. Continuing the current system with the bulk of financing coming from payroll contributions and budget transfers would be increasingly expensive for the budget. Progressively increasing the retirement age, requiring contributions to the pension system, and building up a reserve fund would considerably reduce the trend towards long-term deficits and also increase the resiliency of the system.

The financing of social security is not entirely clear, even to the people involved. Everybody seems to know that there are pension systems and benefits, but nobody seems to know where the money is coming from, how much is contributed, how much is financed out of oil revenues, and what the risks to the system are in the long term. Often, media reports focus more on the size of the increases than on the costs and obligations involved over the longer term. In addition, there are often weak links between contributions and entitlements to benefits

in the case of informal workers and the self-employed. This weakens the contribution discipline and can over time reduce confidence in the system.

Despite recent reforms to the legal and policy framework, which generally meet most of the calculated objectives for sustainable financing, there is no dedicated legislation for a social security reserve fund and investment legislation is not sufficiently well developed. There is no information yet on the second funded pillar and how voluntary supplementary pension schemes should combine with the public pillar. The country uses result-based budgeting as well as actuarial principles, though these are not formally ensured to be used throughout the budget cycle. Although the system works today, the road map for further development is not fully mapped out and there is not much room for further revenue sources.

Consequently, the following recommendations have been made:

1.   Strengthening legal provisions governing social security financing. Azerbaijan's social security legislation needs to be revised to include provisions related to the diversified financing of the social security system, such as the legal status of the Social Security Reserve Fund, the rules for replenishment and use of the Fund, and the definition of state and insurance-based obligations. The law should also lay the basis for the voluntary or supplementary funded schemes and their relationship with the public pension scheme and thereby establish a first step towards a sound and predictable financing architecture.

2. Making financing more transparent. Regulators and social security institutions should convey information about the financing structure in more user-friendly ways and in more accessible language. These should include regular reports on shares of contributions and state transfers, oil-related social spending and projected aggregates of pension and social spending. Visual presentation, simplified reporting, public briefings, etc., would help the public understand for example why measures like raising retirement age need to be taken. Greater transparency fosters trust and motivation to contribute.

3.   Broadening the contribution base and improve collection. Given the narrow base and heavy burden on formal workers and employers, the State Social Protection Fund and tax administration should focus on widening the contribution base. More practically, contributions for self-employed and micro businesses should be simplified, integrated with social insurance and tax declarations, and incentives for formalizing should be provided alongside better enforcement for larger firms that currently evade contributions. Contributions should be collected automatically, and payments should be easy to make, with fewer opportunities for errors. A broader base of contributors allows for greater stability over time in funding.

4. Systematic actuarial planning and result-based budgeting. Every pension scheme, and other social security benefits should be the subject of regular, mandatory actuarial analysis. This

entails having a dedicated actuarial team or unit, preparing long-term actuarial assessments at least every three years, and incorporating actuarial findings into the budget process. The social protection budget process should progressively move towards result-based budgeting, seeking to establish indicators based on replacement rates, coverage of vulnerable groups, and impact on poverty reduction as a measure of system performance. Funding for each major programme should be justified in terms of these indicators, and progress against targets should be reviewed annually.

5.   Building up a social security reserve fund gradually. The government should build up a social security reserve fund, particularly for the pension system. The fund invests in a transparent and wise manner. In times of revenue surplus, some of the contributions or a small share of the oil revenues are transferred to the fund. The revenue from these investments can then be used to help finance pension obligations and smooth the effects of years when pension costs exceed contributions received. A well-run reserve fund, separate from the annual, budgeted revenues and expenditures, can reduce the volatility of transfers to finance pension costs, while sharing the benefits of returns amongst current and future beneficiaries.

6. Supporting labour market policies which are consistent with financial sustainability. Social security financing and labour market objectives are closely related and policies to promote longer and more productive working lives are therefore important. This includes measures to ease older people's labour force participation when they wish to work including improvements in women's labour force participation and the provision of skills to assist labour market reallocation in response to structural change. Efforts should continue to diversify away from oil, with a wider non-oil sector providing a more stable source of long-term income growth. Active labour market programmes can reduce the duration of unemployment, thus increasing contribution inflows and decreasing reliance on social assistance.

7.   Using international experience carefully and adapt it to the national context. Azerbaijan can learn from other countries' successes and failures in social security reform, including from the experience of the transition economies and resource-rich countries. Such examples include multi-pillar pension systems, rules-based spending of resource revenues on social protection, and creative ways of targeting social assistance. However, these experiences should not be adopted uncritically but assessed against the demographic, institutional, budgetary and political realities in Azerbaijan and piloted or phased in to prove which aspects of these experiences are appropriate and which are not.

Ultimately, while Azerbaijan has made considerable improvements in the coverage and adequacy of its social security system, the questions of financing efficiency and sustainability remain open. The contribution base is wider than in the past, but the system continues to be

reliant on the state budget and will be subject to demographic shocks and potential economic shocks in the future. Through continued legal reform, expansion of the revenue base for social security financing, introduction of new instruments of planning, establishment of a reserve fund, and coordination of labour and social policies, Azerbaijan can build a balanced, transparent and resilient model of social security financing. This would provide adequate protection for its citizens in a coordinated and timely manner, before the emerging pressures from thin fiscal space and demographic trends become severe, and would also serve as an example for other countries in the region.

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