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Presentation

The Inter-American Conference on Social Security (CISS) is a specialized international technical agency with a permanent status that was founded in 1942 with the aim of promoting the development of social security and protection in the Americas. Since its founding, the Conference has recognized the importance of social security and protection policies to ensure people's well-being and support the economic and social development of countries. However, it is also important to recognize that we are currently facing a stage with new challenges, including new markets and labor relations, demographic changes, and sustainability and universal coverage, overall presenting a major challenge for social security and protection.

The mission of the CISS is aimed at improving the quality of life of people by strengthening institutions in the development and implementation of inclusive social security and protection policies in the Americas, ultimately aspiring to become the benchmark in the subject.

Comprising more than 80 social security institutions from 37 nations of the American hemisphere, our membership currently requires comprehensive and long-lasting solutions that can innovatively respond to these conditions, and the duty of the CISS is to remain close to them to address these challenges by providing technical assistance, undertaking the management and dissemination of knowledge, and sharing best practices, among other cooperation actions.

Arising from this, the *Working Paper Series* semi-annual publication aims to contribute to institutional strengthening, the generation of knowledge, and the development of inclusive public policies to ensure the free and fair exercise of rights and the quality of life of people.

Through this publication, the CISS reinforces its commitment to the dissemination of high-quality research in the field of social security and protection, and to a dynamic and flexible communication among its members, experts and researchers in the field. Thus, the papers it has endeavored to disseminate are aimed at bringing under discussion the current issues and international trends in fields including pensions, health care, employment, and migration. Also of particular interest are studies on topics relating to human rights and inclusive policies—children, older adults, people with disabilities, gender and vulnerable groups.

This issue features three research papers. The first paper was prepared by Daniel Maceira, who holds a PhD in Economics from the University of Boston, specializing in health economics and industrial organization, and is currently a senior researcher at the Centro de Estudios de Estado y Sociedad (CEDES) in Argentina. His paper provides an overview of social insurance models in the broader sense of the concept, and it then focuses specifically on social insurance systems in health care in Latin America. The second paper was written by Gabriel Martinez, who holds a PhD in Economics from the University of Chicago and is currently Director of the Master in Public Policy of the Instituto Tecnológico Autónomo de México (ITAM). His paper provides an analysis of labor migration trends in the Americas, focusing on portability of rights during the various stages of the migration cycle from the point of view of both migrants (documented or undocumented) and their families, and offers

recommendations to improve access to the protection of social security for migrants. Finally, this publication features an article by Joana Chapa, who holds a PhD in Economics from the University of Barcelona and currently serves as Director of the Centro de Investigación Económica (CIE) of the Universidad Autónoma de Nuevo León (UANL), and Cindy Rangel, who graduated from the School of Economics of the UANL. Their paper provides an analysis of the impact of the National Financing Program for Micro-Entrepreneurs and Rural Women (Pronafim) on the generation and redistribution of income among men and women in Mexico. Their study relied on the Accounting Multipliers Model, which innovatively incorporates unpaid domestic work as an economic activity carried out by men and women.

We hope that these papers contribute to the discussion and design of public policies in the topics that are currently in the social security and protection agenda of the CISS.

Mexico City, October 2017

Social Security in Latin America: Development, Recent Reforms and Prospects

Daniel Maceira, Ph.D.

Abstract

This paper provides a general analysis of models of social insurance in its broader sense, and it then focuses specifically on social insurance systems in health care. It presents a discussion of the relation between coverage results, levels of spending, wealth and distribution, the organization of health and pension systems, and the development of non-contributory social protection mechanisms in a context where social protection schemes are broadly being redefined in the Latin American setting. In addition, it presents an analysis of how social insurance systems are organized in health care in Latin America and discusses the reform goals and mechanisms during the past few years. Finally, it identifies the role played by social security institutions in the continent to guarantee social services, pointing at their various responsibilities and suggesting lines of debate to contribute to a future agenda for action.

1. Introduction

During the 1980's, and particularly in the 1990s, various reforms to social security schemes were introduced in the American countries concerning both the operation of pension systems and the provision of health care services. At the same time, social assistance efforts or programs have gained greater importance in providing protection to people outside the contributory schemes.

Such reform processes elicit significant insights, experiences and practices in terms of both the explicitly stated objectives in each case and the instruments used in them. These objectives and instruments have varied significantly among countries, and even within countries themselves through time, linking the policy-making process of reforms with the political and economic context in which they were implemented.

Several countries in the region are currently reviewing their social security systems, either because of the results achieved through the implemented measures or because of the paradigm shifts in terms of the desired mechanisms on social protection schemes. Moreover, the impact of the international financial crisis of the end of the last decade is still present in American economies —as well as in other latitudes—, incorporating new elements to existing ones.

In the last few years, the major international financial organizations, such as the International Monetary Fund (IMF), the World Bank, and the Inter-American Develop-

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ment Bank (IDB), have agreed that the economic performance of the region has slowed down and currently faces a conservative outlook for the coming years. This context has impacted in various ways and levels on social security systems in Latin American countries, demanding containment measures or adjustments. This can sometimes serve as an opportunity to undertake actions for change, in both retirement and health care systems, as well as in social protection and social assistance programs.

We propose to examine the standing of social security systems in Latin America, the changes that are taking place and their challenges, in terms of both coverage and financial sustainability, identifying the alternatives considered. This paper will provide a general analysis of general insurance models in their broader sense, and it will then focus specifically on social insurance systems in health care.

Specifically, the fragmentation of health care systems in Latin America and the Caribbean is a reflection of the gaps in the distribution of income among countries, which can also be seen within countries, between urban and rural centers, and between populations with dissimilar economic situations. These regional gaps are associated with differences in the spending capacity of the States, as well as in the organization of their health care systems, which limit the effective management of the available resources. Having reduced relative responsiveness and greater absorption of epidemiological risk, public systems coexist with state or semi-state social security institutions that separately provide care to families whose income is linked with formal employment.

At the same time, the populations with greater spending capacity go to the private sector, financing insurance plans to formalize precautionary measures against potential disease. Relatively more homogeneous income distributions are typically seen in States that are more institutionally stable, having greater capacity in terms of regulation, financing and provision of services. At the opposite end, countries with greater distribution gaps have more limited public systems, both institutionally and financially, facilitating the development of private insurers and providers that attract the spending capacity of those who are more economically solvent.

These conditions affect the general quality of care in the system, thereby opening the possibility of further fragmentation. Unwanted cross subsidies, double coverage, and inconsistency between packages offered to different populations for similar needs are all results of segmented health systems. As non-health care factors, the links between income and its distribution interact with the organization of the sectoral structure and with the capacity of the State to spend and manage resources in the health care sector. This has an impact on the results of the system in terms of both quality and quantity of benefits and services provided, as well as on traditional indicators: life expectancy, infant mortality and under-five mortality, among others.

This paper discusses the relationship that exists in the Latin American context between coverage results, levels of spending, wealth and distribution, the organization of health and pension systems, and the development of non-contributory social pro-

tection mechanisms in a context where social protection schemes are being redefined in a broader sense.

The following section provides a theoretical framework on the very concept of social security, its perspective from different paradigms, and its evolution towards social protection and financial protection schemes in social sectors. That section is followed by a presentation of a contextual analysis that invokes the need for a revision of the traditional social security schemes in the economic context of the Latin American region. Elements of epidemiological and demographic change interact with phenomena of technological adoption that call into question the assumptions of social policies and demand effective initiatives with a greater capacity to identify priorities and with more diversified and efficient mechanisms for regulation and control. In particular, the concept of technological adoption is not limited to the introduction of new equipment and products —primarily in the healthcare system—, but it rather expands, incorporating tools for management, communication and social control.

The third section presents an overview of the characteristics that distinguish the structure of pension models in Latin America and their recent developments. This includes, on the one hand, the emergence of the private sector during the 1990s —through pension fund managers— as part of the supply of resource management in individual accounts. On the other hand, there is an observed deepening of social protection schemes through non-contributory pensions, and an increase in its prominence during the last decade.

The fourth section moves to a discussion on how social insurance systems in health care are organized in Latin America and describes the reform goals and mechanisms of the last few years. Given the specific socio-economic context in each country, the sectoral reform models show diversity in their organization, but they also show some convergence in terms of the pillars on which a strategy of health care coverage must be built.

In this context, the fifth section identifies the role played by social security institutions in the continent to guarantee social services, pointing at their various responsibilities and suggesting lines of debate to contribute to a future agenda for action.

2. Social security, its perspective from different paradigms, and its evolution towards social protection and financial protection schemes in social sectors

The analysis of a strategy for social security institutions in Latin America rests on two major elements:

a) What is the social protection strategy —in a broader sense— defined by each country and the role that the State is expected to play.
b) What have been the coverage trends in the region during the last few years.

In the first place, the concept of social security has undergone changes and reinterpretations over time. In broad terms, the idea of social security is associated with the need to provide financial protection to families from two perspectives:

Intertemporally, through schemes of income transference by saving in the present and consuming in the future, by means of articulated mechanisms with either common or individual funds.

Contemporarily, by generating inter-personal transfers, from families or individuals with greater economic capacity to those in greater disadvantage in terms of income.

In both cases, there can be models of financial protection in health care and pensions that can match such perspectives. In the first one we can find social health insurance where active contributors with lower epidemiological risk finance those who are older and have a higher service usage rate. It is also the case where institutions providing pensions based on pay-as-you-go schemes resort to intertemporal mechanisms in assigning resources.

Otherwise, any social insurance mechanism in health care involves coverage schemes where an agent can contribute according to his payment capacity and use the services according to his usage needs, regardless of the level of contribution. Non-contributory pension schemes play a similar role, associated with solidarity and cross-subsidies between individuals of the same generation.

Based on this premise, the conceptual scheme of financial protection takes the double responsibility of health care and welfare, which has its origins in the traditional social security school, but adding population groups, thus universalizing the coverage criteria. This, however, breaks off the concept of insurance and separates the specific function of insuring from other functions, such as financing, managing, providing/producing services, and regulating.

The importance attached to the separation of functions, for one thing, makes the potential structure of actors more complex, leading to the introduction of private participants in various roles within the social security models. Furthermore, it determines a distribution of tasks within the State, through autonomous agencies, decentralization at the departmental/state and municipal levels, hospital self-management, etc. Thus, regulatory demand increases, as well as the need for coordination among the various participants. The separation of functions even involved the division between pension systems and health systems, a phenomenon that occurred during the 1990s in many Latin American cases.

In particular, the concept of insurance based on defined contributions through premiums or salary deductions and employer contributions is kept and broadened —as in the case of non-contributory pensions— and/or it expands social protection by defining specific guarantees of rights —as in the case of packages of explicit health coverage.

Historically, the evolution of social security marked a particularly differentiated influence throughout the 1990s, contrasting in some countries of the region with what has happened in the twenty-first century. In the last years of the past century, the paradigm of separation of functions redefined a significant part of the organization of social services.

The separation of functions and the increased participation of the private sector came together with the phenomenon of pension fund managers. The retirement system was then split in some countries, generating individual capitalization or distribution models. In some cases, the role of the State focused on the superintendency institution, while others segmented the insurance mechanisms, with repercussions in terms of management and production.

Health systems, for their part, were heavily pressured by decentralization, the introduction of benefit packages defined and corrected by risk, and an increased prominence of the private sector in the management of funds and provision of services. Outsourcing gained significance in vertical mechanisms of sectoral organization, and so did new forms of employment, such as per capita or module-based models, and even financing schemes based on results.

In some cases, these reforms converged towards a greater coverage, channeling and redirecting the resources of the system. In other cases, the prevailing outcomes was an increased segmentation, increased demand for coordination, and a negative impact on equality.

The last few years were marked by these outcomes, along with a regional process of significant economic recovery. States with greater resources encouraged more active inclusion policies, considering two major elements:

a) Harnessing the conceptualization and management tools developed in previous years.
b) Universalization of rights and access, in both pensions and health services through the implementation of social protection programs with a redistributive backbone.

In any case, the social security institutions that characterized the Latin American region had to adapt to a changing environment. On some occasions, this involved a decreased relative prominence, since they were divided into distinct agencies, thereby restricting their coverage and/or cutting down their budgets. In other cases, by contrast, their scopes of intervention were enhanced, introducing design mechanisms that were more prominent in the sectoral flow chart and/or developing new means of coordination, supervision, and management.

This description points to the need to turn to the international literature and analyze what challenges are being discussed in terms of coverage and what lessons should be incorporated from Latin America to encourage a strategic debate in the future on the health system in general and on the social insurance system in health care in particular.

In the first place, two concepts are once again at the center of the health policy scene, with discussions on its definition of work, the measurement mechanisms that are necessary for the analysis of trends over time and the comparative analysis among countries, and the interlinking between them: universal health coverage and financial protection of the population.

The first, universal coverage, refers to the need to ensure a basis of rights for the entire population, regardless of social, ethnic, physical, and income conditions. The mechanisms that global societies have used to guarantee or advance towards ensuring the right to universal coverage are various, including unified structures managed by the State, such as the British system, more decentralized structures like the case of Spain, and models with greater cooperation between providers and public and private funders, as in the cases of France or Canada.

Although it has been marked by fragmentation, Latin America has explored the establishment of universal coverage systems, with various organizational solutions and consistency in varied access. Recent efforts in the region —using distinct mechanisms— are the cases of Seguro Popular in Mexico or Programa Sumar in Argentina, and the social insurance reforms in Uruguay and, to a lesser extent, in Peru. Aside from the Latin American perspective, the cases of China and Thailand offer models of universal coverage with valuable developments that should be included in the agenda for debate.

The structure of universal insurance does not necessarily refer to the financing mechanisms of the health care system, but rather to the ways to design the coverage strategy and manage resources to guarantee the rights to health. In addition to this, financial protection mechanisms link the strategy of universal coverage with the financing mechanisms used to guarantee such coverage. This leads to alternative combinations of coverage and financing based on general, direct or indirect taxes, or using resources from the labor market.

Beyond the distorting effects that the labor market may have on the health system, the capacity to collect funds from a tax on work facilitates greater coverage of the population and supplements the resources that the State can invest directly to ensure the health of the population.

The success of a financial protection system reduces the possibility of incurring financially catastrophic expenditure or imposing impoverishing expenditure on families —due to the expenditure in health care—, bringing them below the poverty line. Recent literature on financial protection, and catastrophic and impoverishing expenditure is extensive and varied, with international (Xu et al., 2003; Wagstaff & van Doorslaer, 2002; Lustig, 2001) and regional references (Baeza & Packard, 2006; Knaul et al., 2012).

A traditional indicator for assessing financial protection mechanisms in a health system is the percentage of healthcare spending that is funded through out-of-pocket expenditures by households. Clearly, a greater participation of private spending reflects a lower capacity of the State to meet the health care needs of the population,

leaving the responsibility of covering health care demands to families, and thus restricting them to their budgetary capacity. In that case, Costa Rica and Argentina show relatively low percentages —nearly a fifth of total expenditures—, which contrast with the performance of some of the other countries of the region.

Thus, a successful strategy of universal coverage can be supplemented with appropriate financial protection actions. However, there is not necessarily a one-to-one correlation between universal coverage and financial protection mechanisms. In Latin America, it is common to have coverage plans that are segmented in the definition of objectives, either at the sub-systems level or within them, thus undermining the capacity to use the resources that financial protection mechanisms have brought to pour into the healthcare system.

The central issue in much of this literature is the need to identify the role of insurance, and particularly of social insurance in the health care system, as the mechanism that connects the financing with the needs by seeking to distribute the risk of health care costs among individuals or families, regardless of the nature of the financial administration (Arhin-Tenkorang, 2001).

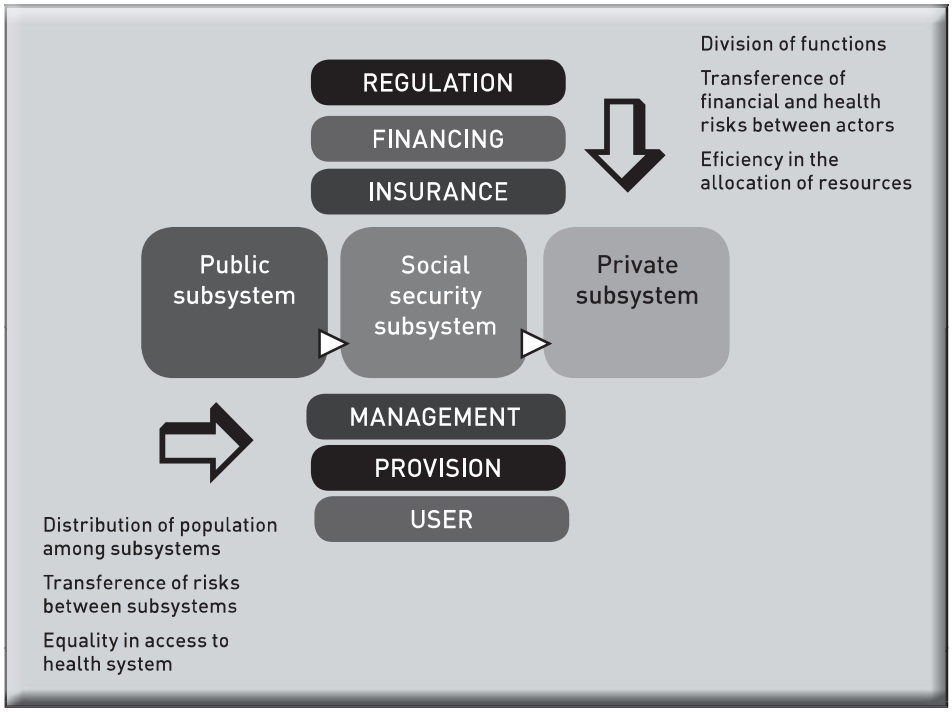
From this perspective, the major challenge in Latin America can be seen by considering that most of the national health care models have segmented or mixed features in the constitution of their social insurance systems (Suárez-Berenguela, 2000; Maceira, 2001; Carrin & James, 2004). This reduces the capacity of undertaking financial commitments and improving the capacity, quality and equality of the rights guaranteed to the population. In this vein, Frenk and Londoño (1997) moved forward in a reform proposal that organizes the distribution of tasks in the health care sector based on functions, rather than social groups.

The framework of analysis that is used in this paper is based on a previous work (Maceira, 2001) that proposes an analysis of health systems through two dimensions of study and proposes to expand pension and retirement schemes. One of them, the horizontal dimension, accounts for the segmentation of the health care model into sub-systems (public, social security and private), while the vertical dimension provides a visualization of the various functions in a health system: financing, insurance, management and provision of services.

Together with the regulatory framework established by the State, both dimensions account for the sectoral mechanisms of transference and absorption of financial and epidemiological risk between sub-systems, and between stakeholders within the vertical chain of the health care model. Thus, this reveals that flaws in efficiency and equality at the benefits level are not only inherent to the structure of provision of services, but they also reflect weaknesses in the financing criteria in the sector, in the strategy for guaranteeing rights and coverage of benefits, and in the management of resources. Based on these axes, we can move forward in the description of health care systems in Latin America to finally get to a discussion on recent reform strategies.

A notable element in the discussion of social policies in the Latin American region, and one that has a significant impact on the criteria and capabilities for public action in social policies, is the income gap, both among countries and within each one of them.

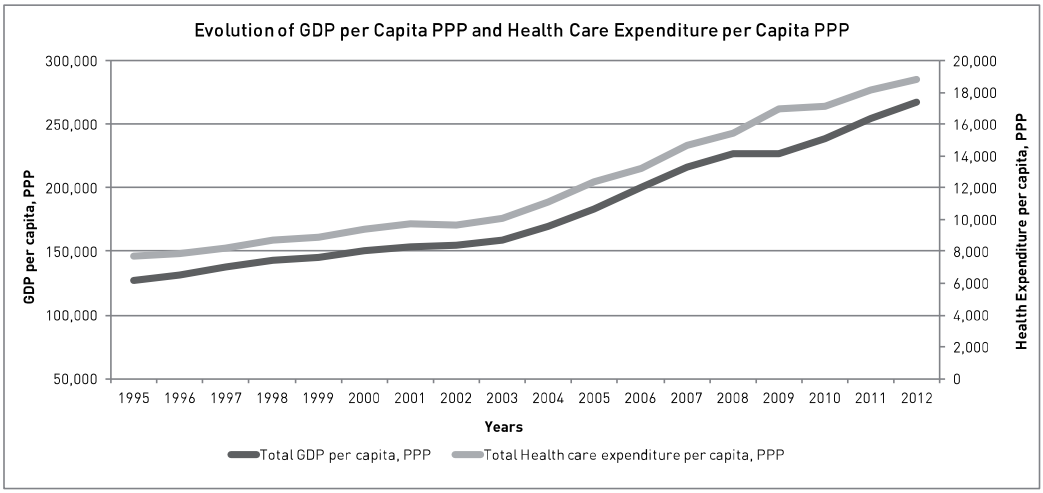
FIGURE 2.1 HORIZONTAL AND VERTICAL DIMENSIONS IN HEALTH CARE SYSTEMS



Source: Maceira (2001).

The following group of graphs illustrates the analysis presented above. The first one shows the evolution of the Gross Domestic Product (GDP) per capita (in dollars adjusted by purchasing power parity, PPP) as a rough indicator of economic wealth of the country, between the years 1994 and 2014, and the change in per capita expenditure on health care in the same period. Both were defined using the information provided in the World Development Indicators website and are the result of the weighted sum of these variables at a national level.

GRAPH 2.1 LATIN AMERICA:
EVOLUTION OF GDP AND HEALTH CARE EXPENDITURE PER CAPITA



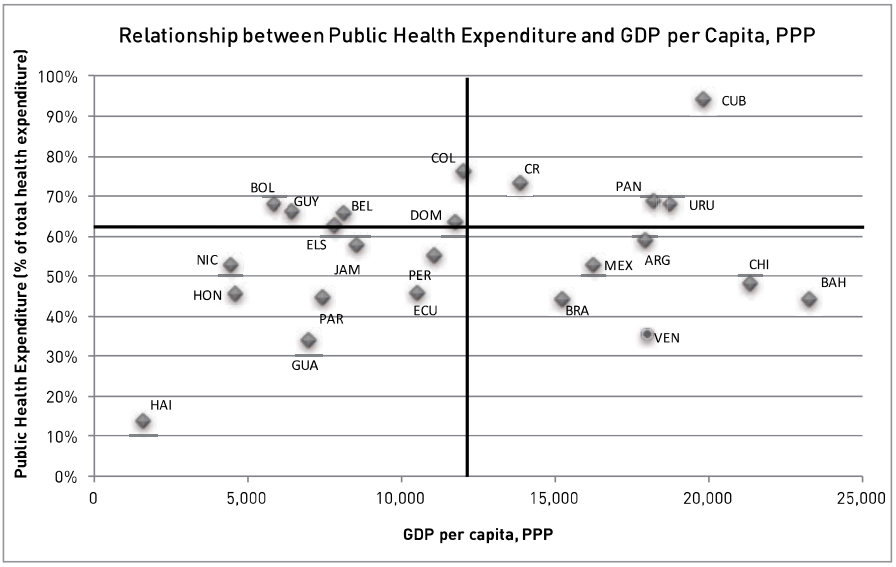
Source: Compiled by the author based on World Bank data, World Development Indicators.

The light gray line, measured on the left axis, represents an increase, in real terms, from $132,500 million in the base year to $282,500 million in 2014, an upsurge of over 115%. The dark gray line, for its part, represents health care expenditure in the same currency but measured on the right axis of the graph. In this case, the rise was more than proportional to the income, undergoing a change of nearly 150%.

This link between wealth and health care expenditure has been observed both in the Latin American region and in other continents. The limited data that has been systematically collected in terms of expenditures on pension systems over time in a significant number of countries of the region does not make it possible to replicate this path in the field of retirement. In any event, it is possible to infer that, at least in terms of pensions and contributory pensions, increased economic development is accompanied by higher levels of decent employment, with its corresponding contributions to the formal retirement system.

To complement this perspective, Graph 2.2 breaks down the mentioned relationship for all Latin American countries for 2012, which is the last period with consistent and homogeneous information for all the nations of the region. In this case, public health investment is expressed as a percentage of total health expenditure. There is an observed positive trend between the two variables, with some nations having a greater participation of public health expenditure and income per capita than the regional average (Cuba, Costa Rica, Panama and Uruguay). The lower left quadrant shows the countries with lower relative income and lower public participation in the destination of the funds earmarked for the health care sector.

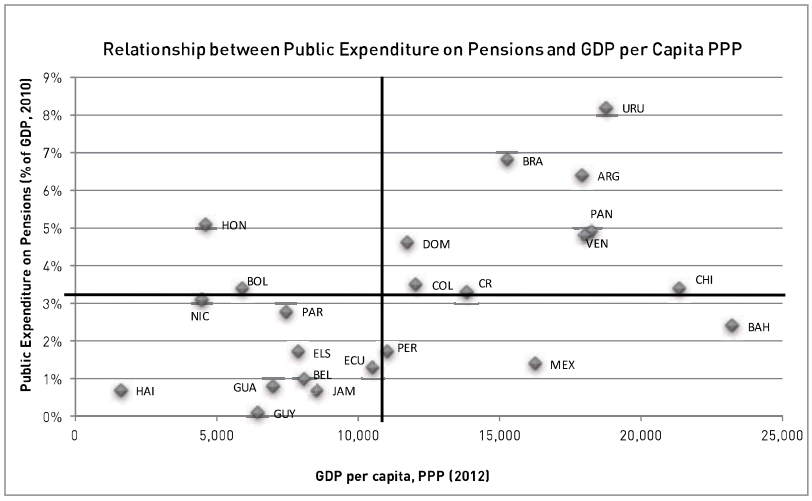
GRAPH 2.2 LATIN AMERICA:
GDP AND PUBLIC EXPENDITURE ON HEALTH CARE QUADRANTS



Source: Compiled by the author, based on the World Bank database, World Development Indicators (year 2012).

Graph 2.3 provides a similar overview of government spending on pensions, as a percentage of GDP. In this case, the positive correlation between both variables is stronger than in the previous graph, with Uruguay, Brazil and Argentina showing a percentage of the national product over 6%, thus surpassing other nations in the region.

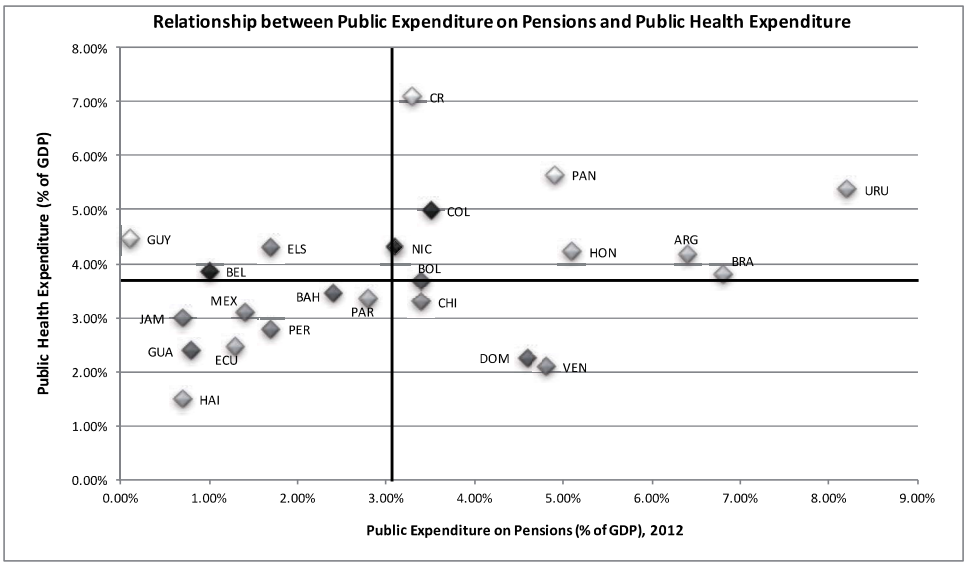
GRAPH 2.3 LATIN AMERICA:
GDP AND PUBLIC EXPENDITURE ON PENSIONS QUADRANTS



Source: Compiled by the author based on World Bank data, World Development Indicators, and OECD, IDB, WB (2015) (year 2012).

The variables of public investment in health care and in pensions are linked in Graph 2.4, which shows four groups of countries: those with high State participation in both sectors as compared to the regional average —upper right—, and those with low relative investment in both policies —lower left.

GRAPH 2.4 LATIN AMERICA:
PUBLIC EXPENDITURE ON HEALTH CARE AND ON PENSIONS QUADRANTS
PER CAPITA VALUES BY COUNTRY



Source: Compiled by the author based on the World Bank database. World Development Indicators and OCDE, BM and BID (2015) (year 2012).

Considering the regional patterns, public expenditure on pensions in Belize, El Salvador and Guyana are relatively higher than their State efforts in health care, while Chile, Dominican Republic, Venezuela, and (marginally) Bolivia show the opposite trend, relatively favoring long-term financial protection as compared to that of the health care sector. The following section discusses the potential challenges associated with social investment in the future, and it then moves to a description of the policies that have been implemented in the countries of the region in each case, discussing their recent reform developments.

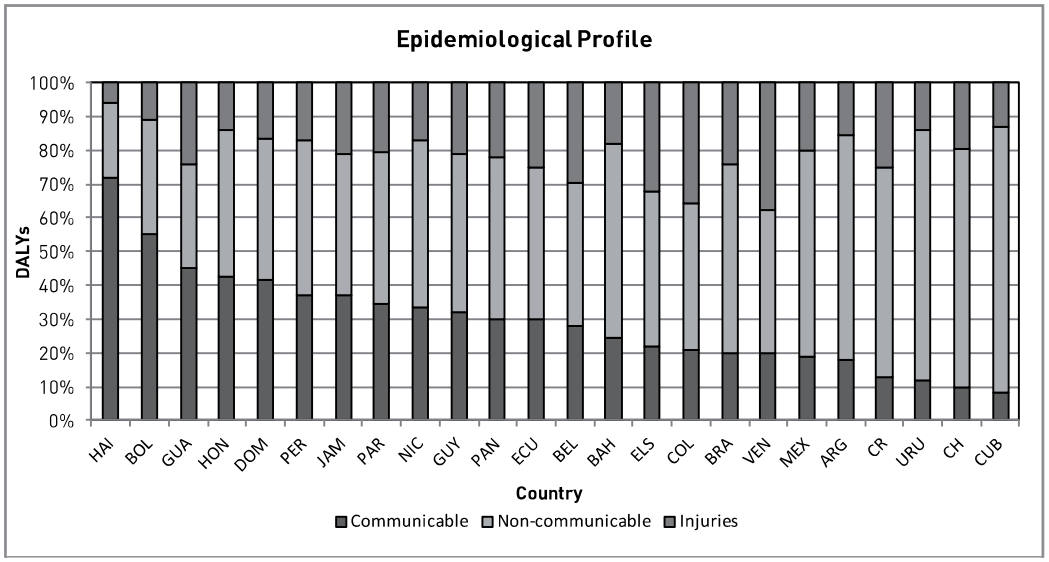
3. New Challenges for Social Security (the structure of pension models in Latin America and their recent developments)

Human progress in terms of the treatment and care of health, primarily, and in terms of the development of social security mechanisms has led to a systematic surpassing of the life expectancy thresholds, thus changing morbidity levels. This has led, first, to growth in the incidence of pathologies associated with old age, and their

increased relative weight in the proportion of disability adjusted life years (DALYs), which entails an increase in the general health care and social security expenditure for States and families.

Graph 3.1 shows the development of the epidemiological transition in Latin America, revealing a greater relative weight of years of life lost associated with non-communicable diseases, but with a large spread within the region.

GRAPH 3.1 LATIN AMERICA:
EPIDEMIOLOGICAL PROFILES



Source: Compiled by the author based on data from World Health Organization, Global Health Observatory (year 2008).

The occurrence of this epidemiological accumulation (having a systematically greater weight of non-communicable diseases than the burden of disease, but maintaining a significant volume of communicable diseases) presents a challenge for planning health care policies because it entails a debate on resource allocation and definition of priorities.

Advanced epidemiological profiles and a greater weight of old age in the composition of the population pyramid are associated with the use of new technologies and drugs that are aimed at assisting the population in the treatment of diseases associated with aging, increased weight of non-communicable diseases, and the occurrence of the so-called new diseases.

These new diseases, in turn, are particularly a result of changes in the behavior of individuals, including problems associated with food, addictions (smoking, alcoholism, drug addiction) and diseases related with pollution, poor treatment of the environment, etc.

The relative weight of these new diseases, as compared to the total, is on the rise and presents a new challenge, not only to the health care system but also to the criteria on which human resources in health care are trained. These new pathologies represent additional demands to the ones that the health care system already faced, and the formal education system does not necessarily provide tools to address them.

The literature on these topics shows how these phenomena are incorporated into social demands to be included in the organization of programs and in the coverage plans of health care systems.

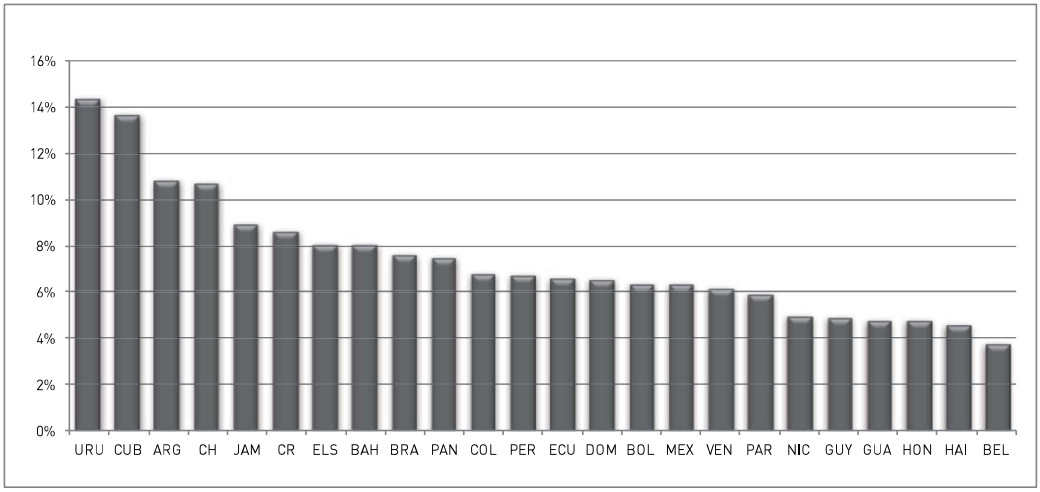
> The ageing of the population is a global issue that affects, or will soon affect, virtually all countries around the world. Changes in the population pyramid are primarily driven by the fall in birth and infant mortality rates, which is the main feature of the epidemiological transition, leading to an increase of children as a percentage of the total population (Lee, Mason & Cotlear, 2010).

Eventually, this process, accompanied by subsequent drops in birth rates, increases the proportion of older adults in the total population. The process is strengthened by the improvement in quality of life and the increase in the survival rate, which displaces life expectancy.

> In developing countries, 42% of adult deaths occur after 60 years of age, compared with 78% in developed countries. Globally, 60-year-olds have a 55% chance of dying before their 80th birthday. Regional variations in risk of death at older ages are smaller, ranging from around 40% in the developed countries of western Europe to 60% in most developing regions and 70% in Africa.
>
> Historical data from countries such as Australia and Sweden show that life expectancy at age 60 changed slowly during the first six to seven decades of the 20th century but, since around 1970, has started to increase substantially. Life expectancy at age 60 has now reached 25 years in Japan. From 1990 onwards, eastern European countries such as Hungary and Poland have started to experience similar improvements in mortality for older people, but others, such as the Russian Federation, have not, and are experiencing worsening trends.
>
> The leading causes of mortality and burden of disease in older people have not changed greatly over the past decade (WHO, 2003).

In Latin America, the weight of the population over 65 years of age on the national total has increased dramatically during the past 30 years, between 1984 and 2014. According to data of the World Bank, the regional average has shown a rise of 149%, with extremes of 250% in Costa Rica, and less than 15% in Guyana. The same source claims that by 2014 four countries (Uruguay, Cuba, Argentina and Chile) had a population aged 65+ of over 10%, with a lower limit in Belize, with less than 4% (Graph 3.2).

Graph 3.2 Latin America:
Percentage of people aged 65+ in total population



Source: Compiled by the author based on World Bank data, World Development Indicators (2014).

Between 1950 and 2005, life expectancy in developed countries increased by eleven years, while there was a greater growth in lower-income countries, where it rose to 19.5 years. According to Lee, Mason and Cotlear, the growth of the working age population (between 25 and 59 years of age) has been the predominant demographic element between 1975 and 2015. After that, an unprecedented growth is expected to take place in the percentage of people over 60 years of age.

The cited paper introduces a crucial question for developing nations: do countries become older before becoming rich? The opposing argument is that nations with higher percentages of elderly population have lower capacities to generate wealth and, on the contrary, require more resources to attend to an age group that is usually very demanding in terms of health care services.

That is why the problem is associated not only with the topic of monetary income, but also with the establishment of institutions that prove to be sustainable enough to guarantee social protection to their populations, and an appropriate structure of health care risk management by planning income transfers from populations with lower relative needs to others with greater health requirements.

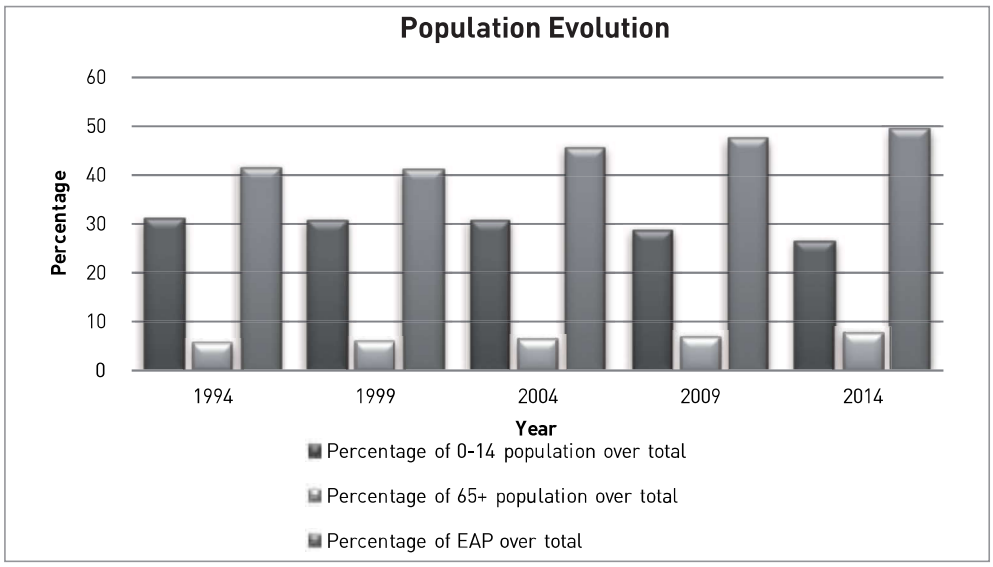
Beyond having arguments to undermine the reasoning presented in the previous paragraph, based on evidence related to the productivity of the elderly in the family (care of grandchildren, facilitators of household chores) or social economy (knowledge and experience applied to everyday problems), the need for a social protection system with a true capacity to deal with the demand is critical, especially in young societies.

Graph 3.3 illustrates the process of demographic transition that occurred in the region during the past twenty years. The graph was made using available information

from the World Bank and adding the population data of the countries in the region divided into three sub-groups: economically active population (EAP), children under the age of 14, and people over 65 years of age.

It can be clearly observed that the so-called "demographic bonus" has a positive impact on the growth of labor force, but this is associated with a drop of nearly 28% in the population under 14 years of age between extreme periods, a situation that jeopardizes the space for financial protection in the future. At the same time, the weight of the population over 65 years of age has increased, with a relatively less significant specific weight, but steadily over time, as mentioned in previous paragraphs.

GRAPH 3.3 EVOLUTION OF THE POPULATION IN LATIN AMERICA 1994-2004 (BY AGE GROUP)

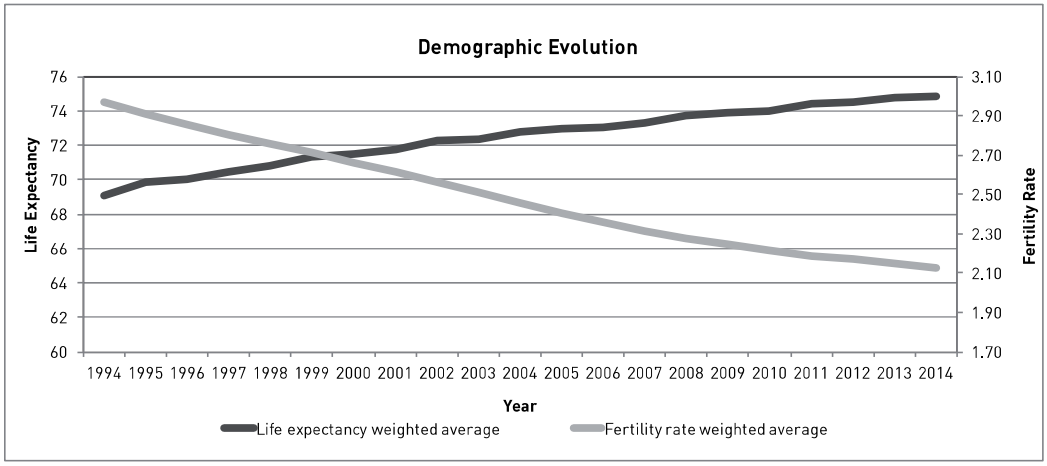


Source: Compiled by the author based on World Bank data, World Developmente Indicators.

The increase in health care and social security expenditure that has been associated with the aging of the population has two distinct components. The first is associated with the case of a greater proportion of elderly population due to a drop in birth rates. In this situation, the total funds collected by a health care system decrease, while the demand for services increases. The second component arises from the possibility of extending life expectancy, which stems from both healthier behaviors and environments, and the development of technologies and medicines that require a bigger budget and better fund management at the sectoral level.

Graph 3.4 illustrates this phenomenon in the Latin American region. Between 1994 and 2014, the total fertility rate declined from 3 children per woman of child-bearing age to 2.15 for the weighted average of the region, which amounts to a total reduction of 30% in only twenty years. At the same time, life expectancy at birth, also for the weighted sum in Latin America and the Caribbean, has increased by six years over the same period, climbing from 69 to 75 for the regional average.

Graph 3.4 Latin America:
Indicators of demographic evolution 1994-2014
(weighted averages)



Source: Compiled by the author based on World Bank data, World Development Indicators.

The literature on financially catastrophic expenses points to the need for institutional response. Families whose members are approaching the age of retirement should contemplate saving strategies to protect themselves from health shocks in the face of weak institutions, which in many cases are exacerbated when in certain societies women outlive their husbands and do not have retirement or pension plans.

Still, the existing structures will be constantly challenged as birth rates decrease and life expectancy increases. The same services that are offered at present shall be guaranteed for a greater number of individuals, increasing the financial risk of the existing institutions, and thus increasing the risk of transferring such risks to families.

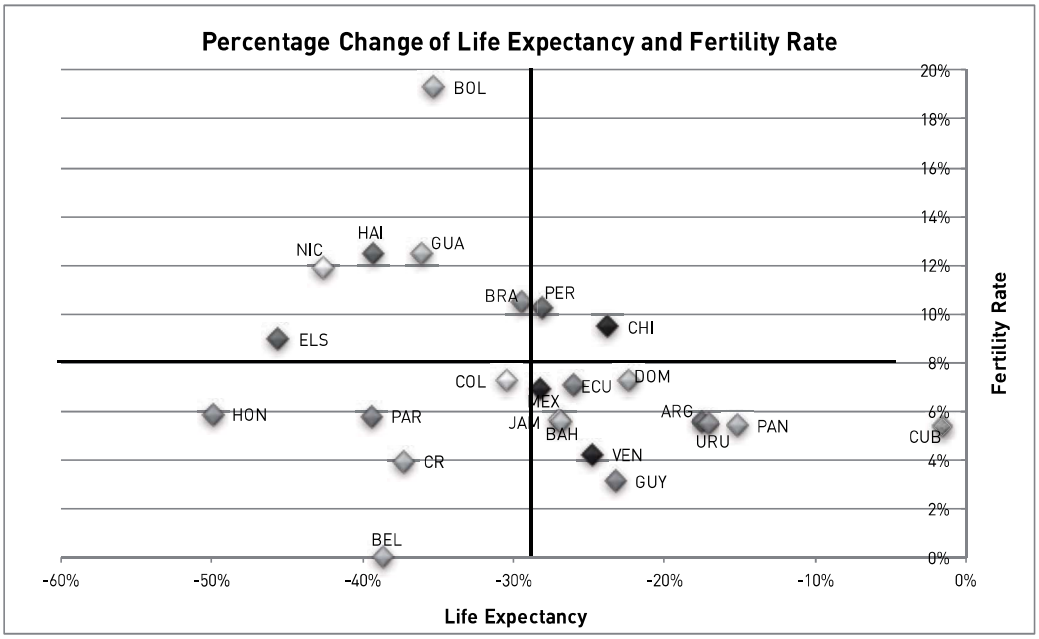
In those cases, the capacity of resolution shifts from social institutions to family institutions, thereby affecting equality in the group, reducing the savings rate of families with higher relative and economic income, and spreading poverty to other households. Beyond this discussion, the topic of aging also reflects the need to analyze the phenomenon of quality of life and its relationship with the quality of health services.

Graph 3.5 shows, furthermore, that the demographic conditions in the region are far from being homogeneous by comparing the development of the indicators of life expectancy and fertility among countries in the 1994-2014 period. There is an observed negative correlation between the two variables: nations with a greater reduction in fertility rate are associated with greater increases in average life expectancy at birth.

The lower right quadrant shows the countries where the population became relatively older, surpassing the regional average of increase in life expectancy, while its fertility rate decreased in greater proportions than the average. Some of the countries with greater regional economic development are in this quadrant (Argentina,

Bahamas, Mexico, Uruguay, Panama), although there are also other less developed countries in terms of their annual per capita production (Ecuador, Dominican Republic, Guyana). On the upper opposite quadrant are the relatively younger nations, whose per capita gross domestic products are in general below the Latin American average (Bolivia, Nicaragua, Guatemala, Haiti).

GRAPH 3.5 LATIN AMERICA:
QUADRANTS OF LIFE EXPECTANCY AND FERTILITY RATE



Source: Compiled by the author based on World Bank data, World Development Indicators (1994-2014).

According to theoretical reviews in the international scientific literature, quality of life related to health in older adults has been studied by using outcome measures and statistics corresponding to morbimortality and life expectancy; however, other aspects involved in it are unknown, such as perception on their health, knowledge about the social support networks, social protection and health care services.

According to the definition of the World Health Organization (WHO), quality of life is an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. Quality of life is the result of a combination of objective and subjective factors. The objective aspect depends on the individual and the external circumstances in terms of the socio-economic, socio-psychological, cultural and political structures that interact with him/her (Botero de Mejía et al., 2007). In particular, for older adults it involves the close relationship between years of healthy life and life expectancy; thus, it can be expressed as the relationship between quality and disability.

Various authors have analyzed the factors of life that are considered important for quality of life by elderly people, pointing at the following as the most significant variables: family relationships and social support, general health, a functional individual condition, and economic sufficiency. Despite the subjective component in the valuation of each determinant, having good health and being able to care for it without incurring impoverishing expenditure are necessarily among the priorities of any individual.

According to Botero de Mejía et al. (2007), the study of quality of life in old age must involve aspects such as health and functional condition, as well as the identification of risk factors, where functional health refers to the perception of physical, psychological, and social constraints related to a decrease of opportunities due to sickness and treatment. Considering these elements, it is necessary, from the perspective of both health care authorities and social security institutions, to lay out preventive programs, as well as social services and health care programs, that target the entire population, not just older adults.

While the essence of the concept of "quality of life" lies in recognizing that people's perception of their own physical, psychological, social and spiritual well-being largely depends on their own values and beliefs, cultural context and personal history, there is still an institutional and social responsibility to value and facilitate its attainment. In this regard, WHO undertook a pioneer position by including the physical, mental and social well-being, and not merely the absence of disease, in its classic definition.

For the case of Latin America, Todd Jewel, Rossi & Triunfo (2007) analyzed the health condition of the people over 60 years of age by using household surveys in five countries of the region. An active lifestyle, greater education, and, particularly, nutritional status, are —according to the study— the most significant determinants of self-perceived health. These elements are, presumably, highly correlated with income level, indirectly affecting not only the perception of health, but also the quality of life and certain traditional indicators like life expectancy at birth.

To cite one of the foundational studies of the economy of health, Grossman (1972), the reduction of the depreciation of the stock of health and an increased productivity have a direct impact on the health condition. Thus, the design of health care policies for old age must necessarily include interventions to minimize the gaps between income groups and promote preventive behaviors, proper nutrition, and exercise, minimizing the costs of maintaining an adequate quality of life and increasing the likelihood of having a good health.

Beyond the economic factor, as the population grows older, the prevalence of chronic and disabling diseases increases. The diseases diagnosed in older adults are often not curable and, if not treated adequately and timely, tend to cause complications and consequences that affect the independence and autonomy of people.

Although most older people with non-communicable diseases preserve their functional capacity, the degree of disability increases with age. In general, depression,

osteoarthritis, ischemic heart disease, and hip fracture produce the largest number of cases with physical disability in older people who are not interned in institutions (Menéndez et al., 2005, for a study on Latin American cities).

The high prevalence of these diseases in older adults is a major challenge for insurers of health services, as they raise health care costs and increase disability, negatively impacting on perceived quality of life.

Consistent with the argument raised on perception of quality and income, Menéndez et al. (2005) found that, in middle-income and higher middle-income cities, more than a third of respondents considered that their health was not good. This reinforces the need to advance policies that define objective and measurable quality tracer indicators to produce an effective strategy of care, especially for the elderly. These findings are consistent with those that Peláez (2005) summarized based on other prior studies.

The total burden of disabling diseases with non-fatal consequences is dominated by a relatively small set of causes. In all regions, neuropsychiatric disorders, especially depression, are the most important cause of disability. The disability burden associated with them is virtually the same for men and women, although the burden attributable to depression is 50% higher for women than for men; the same happens also with anxiety syndromes, headaches and senile dementia.

By contrast, the burden attributable to disorders associated with alcohol and drug abuse is almost six times higher in men than in women and represents one fourth of the burden of male morbidity caused by neuropsychiatric disorders (WHO, 2003).

Finally, consistent with what has been presented, the Meeting of Experts and Governments on Aging in South American Countries, held in Buenos Aires in November 2005, concluded the following as part of the most significant concerns: the need to increase the visibility of the elderly population in the public agenda and the media, expand the interest groups associated with the protection of older adults, and strengthen the government areas and budgets devoted to improving the living conditions of older adults.

As one of the most relevant conclusions, particularly in the case of Argentina, is the need to articulate the policies aimed at older adults between the government, the non-governmental organizations, the scientific societies and the corporate sector. Considering the organization, financing and provision of health care services in the country as an endeavor of collective action with extensive cross-sectoral participation, the appeal to shared responsibility is significant, conceived under a regulation and rights framework that originates from public authority.

4. Comparative Analysis of the Latin American Private Pension Fund Systems

In contrast to what might have been thought years ago, the analysis of pension systems carries a certain complexity associated with the changes that occurred during the past 30 years. These changes were associated with three specific elements:

- The separation in several countries of the scope of the functions addressed by traditional social security institutions: health care services and contributory pension system.
- The entry of new private actors, PFMS, into the contributory pension system, with different guidelines for insurance, management and provision of retirement services from those of social security institutions.
- The emergence of social non-contributory pension programs designed to complement the existing retirement services, thereby expanding the population served by the social protection system as a whole.

Each of these elements has characteristics that need to be considered, as they were not introduced evenly throughout the Latin American region.

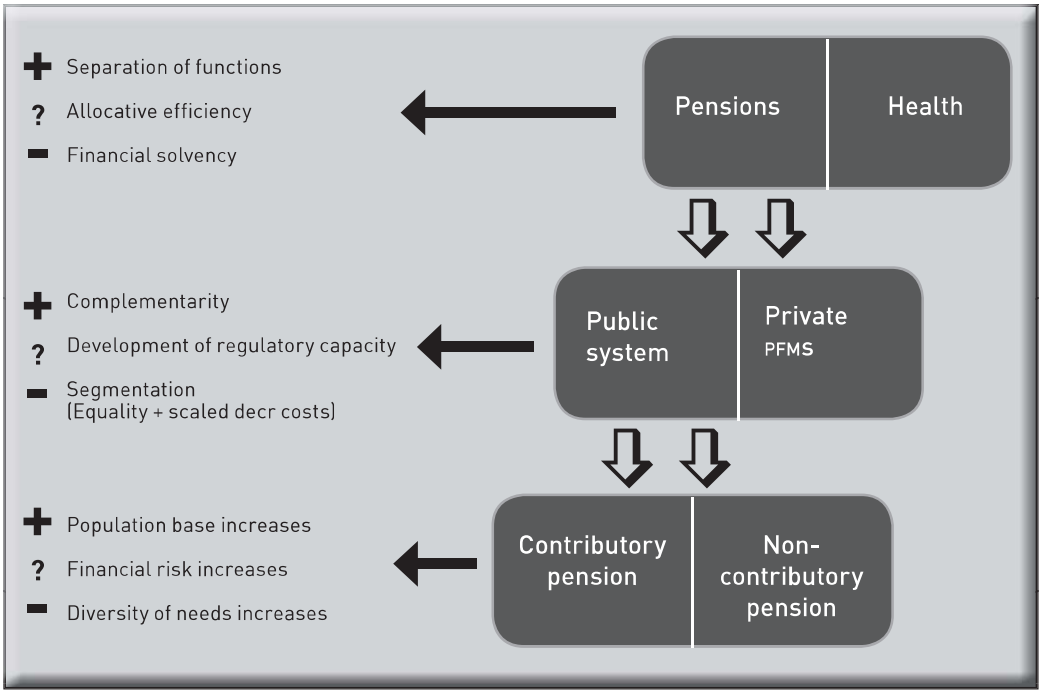
First, the institutional division of the health care and pension functions corresponds to a movement of horizontal separation of functions, which was accompanied by a process of negotiation on the distribution of assets, along with responsibilities that had been undertaken by a single administration for years.

Second, the traditional public model of social insurance, managed by government institutions, is faced with the need to share a range of services managed from the private sphere. Depending on the national case, this involved not only the emergence of a competitive market (with schemes of horizontal and vertical differentiation of products), but also the possibility of segmenting markets according to income levels, with repercussions in terms of equality.

Beyond this, and from the perspective of allocative efficiency, the presence of multiple competitors in an industry of services entails a regulatory effort marked by facilitating the presence of economies of scale in the face of decreasing costs. Various countries laid out different strategies, prioritizing in some cases an increased coverage, the promotion of development of the emerging credit markets based on the availability of funds, or incorporating new mechanisms for resource collection depending on the varying capacities linked to existing contributions.

In third place, the expansion of the social coverage strategy towards non-contributory approaches led to a redefinition of the original pension scheme, including new population groups with different income profiles and needs. This leads to a new construction of social protection that includes the original but evolves into more varied spaces for collection and use of funds, which are not free from financial and distributional risk. A summary of this development, its benefits (+), risks (-) and challenges (?) is presented in Figure 4.1.

FIGURE 4.1 EXPANSION OF THE STRUCTURE OF SOCIAL PROTECTION FOR PENSIONS IN LATIN AMERICA: BENEFITS, RISKS AND CHALLENGES



Because of this, the Latin American population covered by social security systems has grown during the past years by approximately 250%, also as a result of the previously discussed demographic evolution. Part of this trend are fundamentally Brazil, with approximately half of the population over 65 years of age covered, followed by Argentina, Mexico, Chile and Colombia.

We propose to use the scheme of functions and actors presented by Maceira (2010) for the health care sector, applied to the case under analysis. In this case, the horizontal dimension is given by three sub-systems, the public —in its dual role to guarantee contributory pensions, through the national social security institutes and the administration of resources for the coverage of non-contributory pensions— and the private market of pension fund managers.

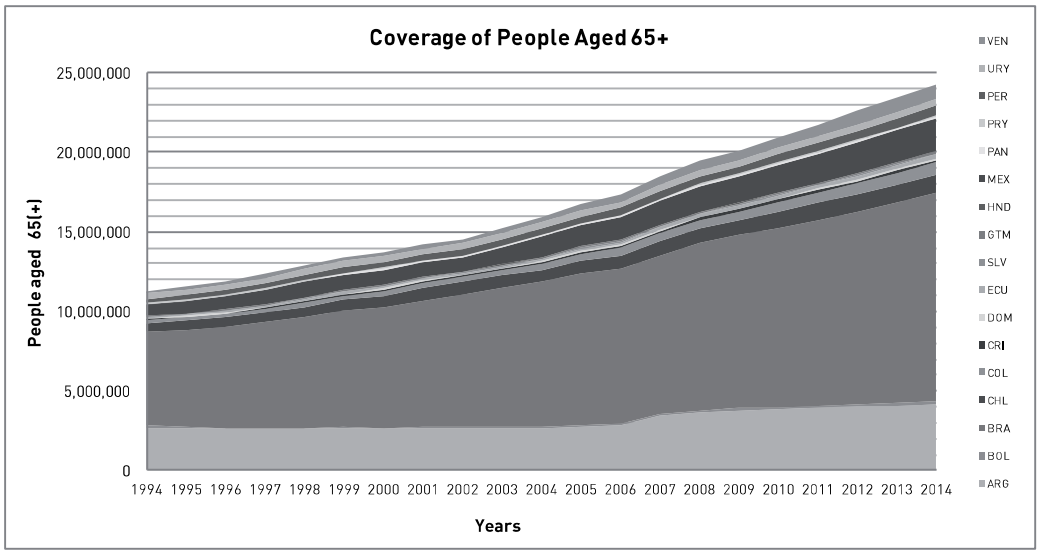
The vertical dimension represents the functions to be covered by the retirement and pensions sector. These are:

- The financing of the social security system, originally based on employer contributions and wage contributions from those with formal employment, evolving into supplementary resources from state treasuries.
- The insurance function of the new model, as a central function of the social security scheme, is responsible for identifying the greatest diversity of funds

to be administered, establishing the contribution mechanisms, the definition of premiums and rights, the modes of capitalization and use of funds, and the alternatives for pensions distribution with a much more diverse menu of options. This includes the design of eligibility schemes and their development through time.

- The management of funds is thus segmented into a mixed model, whose actors are the social security institutes, the authority responsible for managing the resources allocated to non-contributory pensions, and the private PFMs.
- These public and private institutions are also responsible for the financial implementation of the collected resources, as well as the calculation of interests in the private sector and the management and control of public funds in the state sector. In both cases, the provision of retirement services involves the development of guidelines for distribution and control, which are often associated with the outsourcing of banking operations.

GRAPH 4.1 EVOLUTION OF COVERAGE OF PEOPLE AGED 65+, LATIN AMERICA 1994-2014



Source: Compiled by the author basen on IDB data (https://data.iadb.org)

In line with this scheme, Table 4.1 shows the basic axes of the insurance scheme for a group of selected countries. The first column shows the percentage of the target population (aged 65+ as a general rule) in relation to the economically active population. The following columns show effective coverage by contributory pensions, the level of contributors in the working population —the column ordering the Table— and the participation of the pension scheme based on a capitalization system that relies on PFMs, if it is the case.

The range for the target population is wide, varying from 23.77% or 21.72% in Costa Rica and Argentina, respectively, to 11% in El Salvador and Bolivia. The information from the Inter-American Development Bank shows, however, that, of the total target population, the average percentage of those who have access to contributory pensions in the 13 analyzed countries is 35%, with an upper limit of 80% in Argentina and Brazil and a lower limit of 15% in Dominican Republic and El Salvador.

The weight of adult contributors to the pension system also shows the regional diversity, with a gap of 4 to 1, approximately, between Uruguay and Nicaragua, which represent the two ends of the scale. Finally, the presence of PFMs completes the Latin American scatter map, with six nations having a participation of these fund management mechanisms of over 30%.

TABLE 4.1 LATIN AMERICA
INSURANCE IN THE PENSION SYSTEM
(CIRCA 2014)

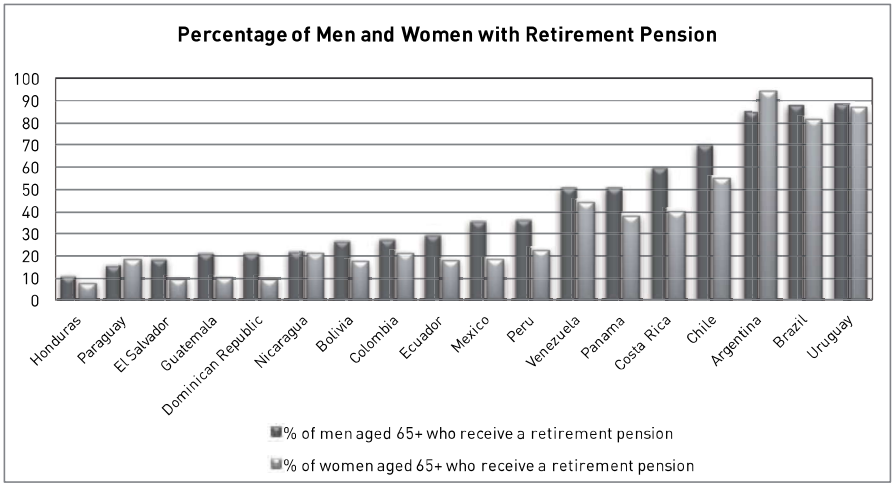
Countries	Population >= 65/ EAP (*)	>= 65 years with contributory pension (%) (**)	Contributing Working Adults (% of working population) (**)	% affiliates that contribute to PFMS (***)
Costa Rica	23.77	48.3	72.64%	63.10%
Chile	13.01	60.7	71.08%	55.30%
Brazil	14.19	83.9	63.78%	
Argentina	21.72	90.0	51.41%	
Ecuador	13.3	22.9	46.33%	
Dominican Republic	17.65	14.7	38.23%	47%
Colombia	13.46	23.6	36.70%	43.40%
Mexico	17.74	25.9	32.54%	30.10%
El Salvador	11.17	13.2	31.39%	25.4%
Bolivia	11.22	21.4	22.29%	
Peru	12.18	28.2	21.71%	43.90%
Nicaragua	14.38	21.2	18.57%	
Guatemala	27.78	15.2		

Note: Peru and Colombia have both the individual capitalization system and the distribution or scaled average premium system. The information corresponds to the individual capitalization system.

Sources: (*) World Bank; (**) IDB; (***) AIOS.

Graph 4.2 complements the regional insurance scheme, showing the differences in coverage of contributory pension systems, for both men and women. Honduras, Paraguay and El Salvador show percentages below 20% in coverage of men, while Uruguay, Brazil and Argentina are above 80%. The situation becomes more challenging in the case of pensions for female citizens in the region, with eight out of 18 countries covering less than 20%.

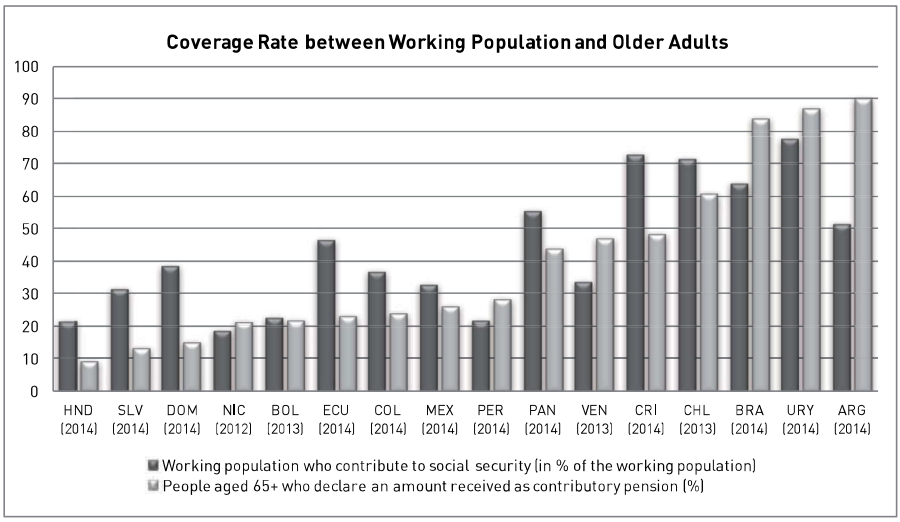
GRAPH 4.2 PROPORTION OF MEN AND WOMEN WITH RETIREMENT PENSION
2014



Source: Compiled by the author based on IDB (https://data.iadb.org). Year 2014 (except for Chile and Venezuela (2013) and Nicaragua (2012).

In terms of contributors and recipients of pensions, the region shows a marked difference in income in the second case, with Mexico standing out as a notable case with lower coverage than expected. In terms of working contributors, the information shows greater variability: Argentina shows a relatively lower weight than what would be associated with its level of economic development, a situation that is probably due to its tax regime, while other nations like Ecuador, Dominican Republic and El Salvador are above countries such as Peru, Colombia or Mexico (Graph 4.3).

GRAPH 4.3 CONTRIBUTORS AND RECIPIENTS OF PENSIONS
(% OF TOTAL)



Source: Compiled by the author based on IDB data (https://data.iadb.org).

The financing model of the pension structures includes three distinct financing regimes, six cases involve mainly distribution schemes, three cases operate with individual capitalization, and the remaining five (of a total of 14) use mixed models.

Table 4.2 summarizes these trends, adding two regulatory factors that characterize the financing models: the number of years of contribution and the established retirement age. In the first case, there is a wide variance, ranging from 25-30 years in nine cases to 15-18 years in Nicaragua and Guatemala, respectively. Retirement age, for its part, is close to 60/65 years depending on whether it is men or women, respectively, with only one case (Bolivia) where the threshold is marginally lower.

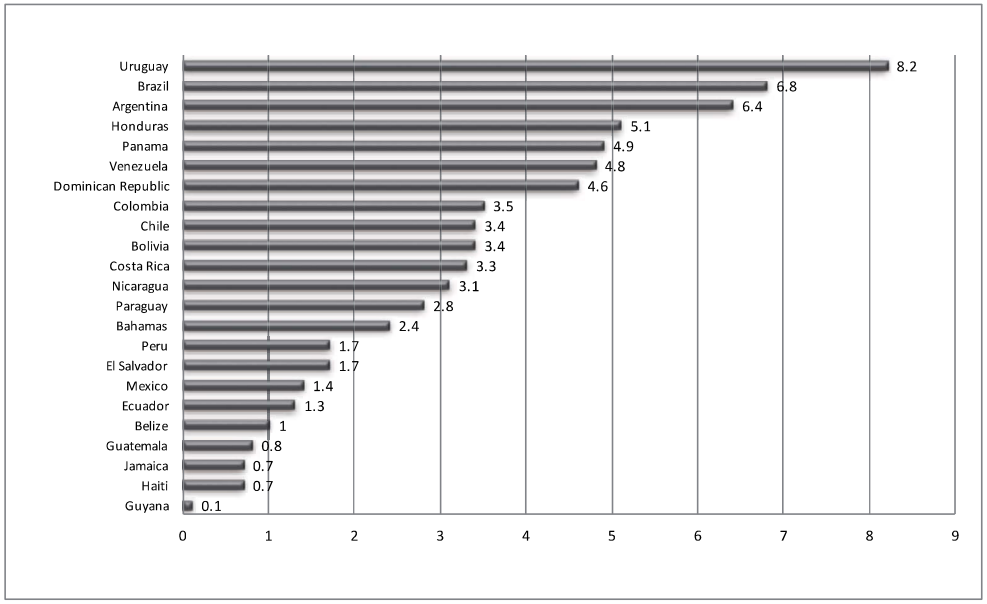
Finally, the last column shows public participation in the pension system as a percentage of Gross Domestic Product. This indicator, which marks the order of the countries on the Table, shows a difference of 6.3 times between Uruguay, with 8.2% of its GDP in the retirement sector, and Ecuador, with 1.3%. It is relevant to note that the financing scheme is not necessarily linked to any particular level of economic development, or to any particularly high or low state outlay plan. Graph 4.4 classifies all Latin American countries based on this last guideline for sectoral public expenditure, showing that dispersion increases with the size of the sample.

TABLE 4.2 LATIN AMERICA
FINANCING OF THE PENSION SYSTEM

Countries	Financing Scheme	Years of Contributions	Retirement Age (man/woman)	Public Expenditure on Pensions (% of GDP)
Argentina	Distribution	30	65/60	6.40%
Brazil	Distribution	35 (men) - 30 (women)	65/60	6.80%
Guatemala	Distribution	18	60	0.80%
Bolivia	Distribution	..	58	3.40%
Nicaragua	Distribution	15	60	3.10%
Ecuador	Distribution	25	60	1.30%
Uruguay	Mixed	30	60	8.20%
Colombia	Mixed	25	62/57	3.50%
Costa Rica	Mixed	25	65/60	3.30%
Peru	Mixed	20	65	1.70%
Mexico	Mixed	24	65	1.40%
Dominican Republic	Individual Capitalization	30	60	4.60%
Chile	Individual Capitalization	..	65/60	3.40%
El Salvador	Individual Capitalization	25	60/55	1.70%

Source: OECD, IDB, WB (2015).

GRAPH 4.4 PUBLIC EXPENDITURE ON PENSIONS AS A PERCENTAGE OF GDP
2010



Source: Compiled by the author based on OECD, IDB, WB (2015) (year 2010).

Of all the countries of the region, nearly half of them have private systems partially based on the management of individual capitalization funds by private companies (PFMS). However, both their weight percentage in the pension system and the number of competitors and their development through time are markedly different. This partly depends on the regulatory framework that each nation has established for the operation of this market and on the country's population size. As part of the services industry, the PFM market operates in a decreasing tranche of its costs function, making its monitoring and control function particularly important for the effective development of the pension model.

Table 4.3 shows, for the analyzed countries, total population and per capita income adjusted in international dollars to facilitate comparison, followed by four traditional indicators of the PFM markets: the number of affiliated people and the percentage of the total population it represents, the number of firms participating in the market, and the Herfindahl market concentration index, which is calculated by squaring the market share of each PFM and then summing the resulting numbers and multiplying the result by 100.

Chile and Mexico lead the group, with a GDP per capita above twelve thousand dollars per person, followed by Uruguay, Panama and Costa Rica. At the opposite end is Bolivia, with a monetary income four times lower than that of the leader of the group.

Table 4.3 Latin America
Pension management by capitalization*

Country	Total Population in Millions (1)	GDP per Capita in PPP (2)	GDP per Capita in PPP (3)	Affiliated Population in Millions	No. of PFM (4)	Herfindhal Index (5)
Mexico	105'280,000	12,775	38'987,711	37.03	21	852
Colombia	43'926,034	6,724	8,403,715	19.13	6	2,109
Peru	28'220,764	7,803	4'259,889	15.09	4	2,006
Chile	16'590,000	13,936	8'308,264	50.08	6	2,670
Bolivia	9'827,522	4,013	1'143,559	85.51	2	5,039
Costa Rica	4'355,308	10,300	1'720,116	39.49	8	2,144
Panama	3'340,000	10,322	342,513	10.25	2	5,015
Uruguay	3'323,906	11,621	822,663	24.75	4	2,770

* Data from 2007.
(1) World Bank.
(2) IMF.
(3) (4) (5) Compiled by the author based on data from AIOS and FIAP.

Source: Maceira et al. (2010).

This indicator, along with that of the population, should establish certain patterns of market concentration in private pension schemes, adjusted by the structure of income distribution and the presence of alternative coverage mechanisms (public systems, alternative funds).

It is presumed that the larger the population, the higher the probability of finding denser markets in terms of number of participating companies. Furthermore, a higher income could be associated with higher rates of formal employment and/or voluntary adhesion to pension systems, presumably leading to an increased affiliation. This would increase the size of the market and the incentive for entry, resulting in a larger number of suppliers and lower concentration.

These hypotheses have a clear correlate in the case of Mexico, one of the nations with higher per capita income of the group and a population that more than doubles that of the following country on the list. With a PFM affiliation of nearly 40%, the country has more than twenty participating firms, and the lowest concentration index of the group. Similarly, Chile, having a high income and average population compared to the rest of the group, has an affiliation level above 50%, and its concentration index hovers around the regional average. This analysis could apply to the case of Uruguay, but to a lesser extent due to its reduced population.

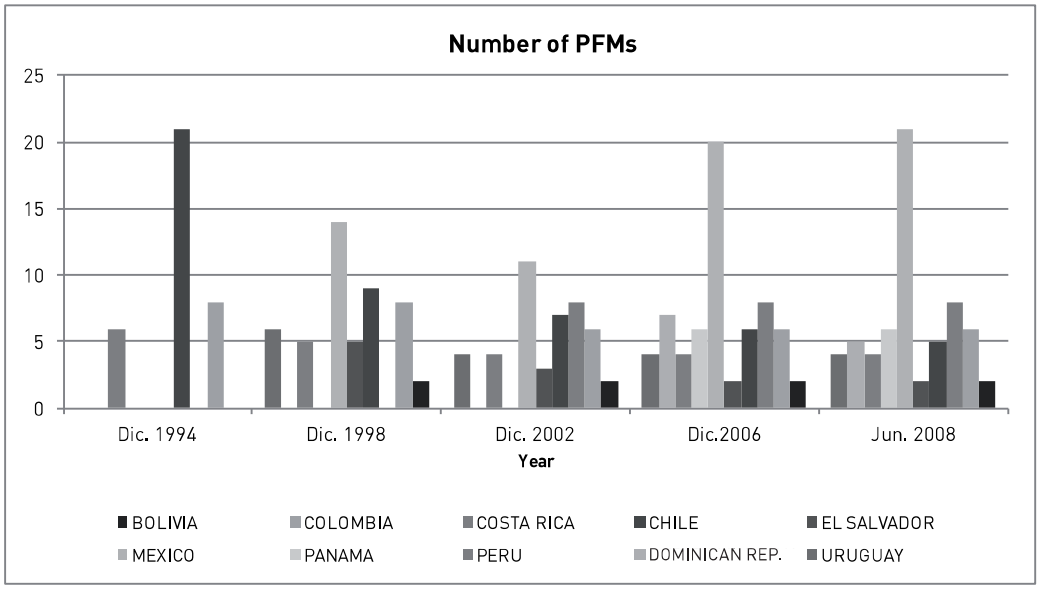
By contrast, the countries with less population and history of the system (Panama) or relative income (Bolivia) show higher levels of concentration, supporting the traditional assumption about scale and concentration.

Finally, Costa Rica stands out with a clearly lower concentration index than what is expected considering its population size, and a relatively high presence of firms operating in the market.

The extent to which the link between size (in terms of population or income) and market concentration is maintained must be associated with two key elements: first, the size of the operations of each firm and its impact on the cost structure, and, second, the regulatory framework that may facilitate or hamper the entry of firms and the achievement of economies of scale.

According to Maceira et al. (2010), there is an observed general increasing trend in average operation costs per affiliate in most of the studied countries. Chile and Colombia led this trend in the 2002-2007 period, but they were surpassed by Peru in 2006, having the highest regional increase and reaching US$40 per person per year at the end of the period. According to the authors, these costs are linked with the capacity to generate competition within the market and its impact on the number of participating actors.

GRAPH 4.5 EVOLUTION OF PFMS BY COUNTRY
1994-2008



Source: Asociación Internacional de Organismos de Supervisión de Fondos de Pensionaes (AIOS).

Except for the case of Mexico, where the number of participating firms has increased since 1995, the rest of the nations with private pension schemes have experienced a process of concentration or preservation of the original structure of the industry.

Bolivia, Costa Rica and Panama initially established and maintained their density in terms of supply over time, while in six other nations (Colombia, Chile, El Salvador, Peru,

the Dominican Republic and Uruguay) the number of actors decreased, with El Salvador on one extreme with a 60% decrease, and Colombia on the other end with a 20% decrease.

During the period between 1981 and 1992, there was an increase in the number of competing firms in Chile, but from 1995 onwards there was a dramatic reduction of the supply, which remained until 2010 (Maceira et al., 2010).

At the same time, this resulted in a sustained increase in the number of affiliates to the private capitalization system, with the case of Colombia standing out for its marked growth, and the Mexican model for its strong growth since mid-2001.

To complement this analysis, it is relevant to mention that the contributor/affiliate ratio in each of the regional systems is high, and it is close to 55% in the cases of Uruguay, the leader of the group, followed by Chile and the Dominican Republic. In this group, Costa Rica stands out due to a decrease in this ratio by 2006 and a subsequent strong recovery that took it to about 50% at present.

A second group of countries with ratios around 40% includes Colombia, Peru and Bolivia. These countries experienced a sustained increase in this ratio during the 1994-2008 period, while Mexico and El Salvador sustained, with only a slight decrease, historical averages hovering around 40%. Finally, away from the rest of the systems, there is the case of Panama, the most recent model in the region, with low ratios oscillating around 10%.

In all the cases, however, there is an evident increase in the number of affiliates in relation to the economically active population, with Chile leading the group, followed by Mexico and Costa Rica. In the first case, the percentage in the past few years exceeds 100%, possibly because it is the oldest system in the region, having a share of its beneficiaries already receiving the benefits of the contributions they made during their active period in the labor market (Maceira et al., 2010).

At the other end, Table 4.4 shows the non-contributory pension scheme associated with old age for a group of twelve nations from the region. As these programs overlap with other government initiatives, their level of coverage does not necessarily indicate the intensity of the policy.

However, there are relevant cases like Bolivia's Renta Dignidad initiative, Argentina's Programa de Pensiones en Vejez, or Mexico's Pensión para Adultos Mayores, with more than 70% coverage of the target population.

In any case, the differences can also be seen in the amounts associated with each policy, as well as in their weight in the country's gross product. Brazil's Continued Payment Benefits program provides $378 per beneficiary, while the Programa Colombiano de Protección Social al Adulto Mayor provides $47.

Table 4.4 Latin America
Non-contributory pension in old age
(2013)

Countries	Non-Contributory Pensions				
	Program	Age	Coverage as % of older adults	Transfer US$ (monthly)	% GDP
Argentina	Pension Program (Old Age)	70 +	80	373	0.02
Bolivia	Renta Dignidad	60 +	100	81	1.24
Brazil	Continued Payment Benefit	65 +	12.4	378	0.31
	Previdência Rural	60 +	27.2	363	0.99
Chile	Basic Solidarity Pension for Old Age	65 +	33.4	207	0.42
Colombia	Social Protection Program for Older Adults	57+	21.4	47	0.12
Costa Rica	Non-Contributory Pension Scheme - Basic Amount	65 +	27.3	205	0.34
Ecuador	Pension for older adults	65+	56.9	88	0.36
El Salvador	Nuestros Mayores Derechos	60+	4.6	95	0.07
Guatemala	Economic contribution or Older Adult program	65+	14.5	99	0.12
Mexico	Pension for Older Adults	65+	72.5	56	0.22
Peru	Pension 65	65+	15.7	77	0.08
Uruguay	Non-contributory Pension for Old Age and Disability	70+	24.8	368	0.62

Source: Inter-American Development Bank <https://data.iadb.org/>.

The combined effects of these financing, insurance, management, and provision mechanisms translate into an impact on absolute and relative coverage between gender and social groups with different income. Table 4.5 and Graph 4.6 illustrate this by using two results trackers. The first is the percentage of the population aged 65+ that benefits from a contributory pension.

The second is the rate of coverage of this benefit between the first and the last quintiles of income. A rate of one means equality in social security benefits: regardless of the level of income of the family or individual, financial protection of older adults is transversely equivalent in society. As the indicator moves away from the unit, it denotes distribution biases. Given the information available through the Inter-American Development Bank, it is possible to split this tracer indicator into women and men.

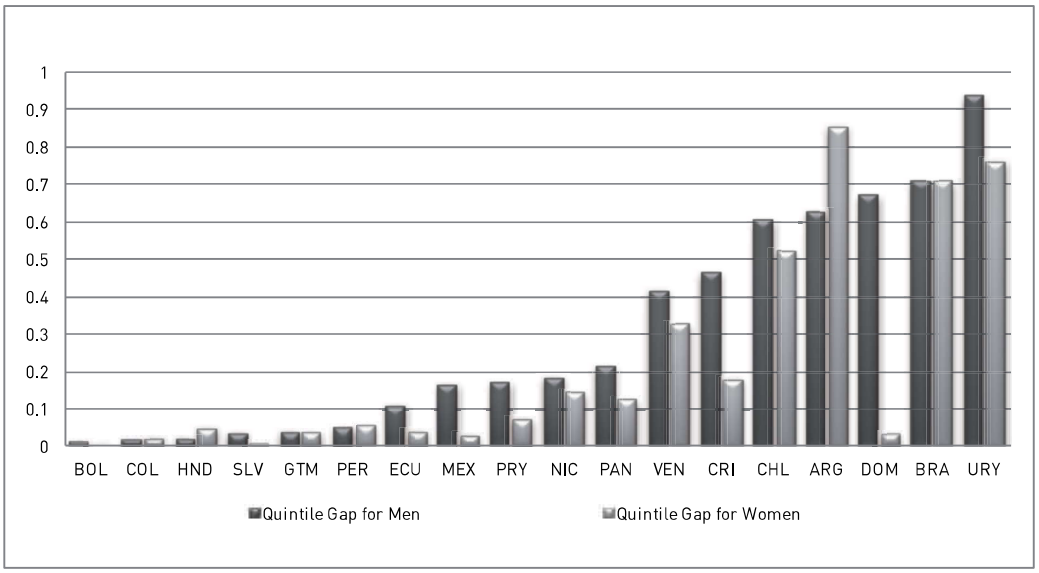
Except for the cases of Honduras, Argentina, Peru and Colombia (in that order), in the rest of the countries the level of women's protection is lower than men's. Brazil shows a balance between genders, but Bolivia, Dominican Republic, El Salvador and Mexico are the nations with the least progress in this particular topic.

TABLE 4.5 LATIN AMERICA
COVERAGE AND EQUITY IN CONTRIBUTORY PENSIONS

Countries	People aged 65+ with contributory pension (%)	Quintile Gap (Q1/Q5) among those who receive contributory pension	
		Men	Women
Argentina	90.0%	0.624	0.853
Uruguay	86.7%	0.933	0.759
Brazil	83.9%	0.704	0.706
Chile	60.7%	0.602	0.518
Venezuela	46.8%	0.412	0.323
Costa Rica	48.3%	0.463	0.177
Nicaragua	21.2%	0.18	0.142
Panama	43.7%	0.211	0.122
Paraguay	16.9%	0.168	0.068
Peru	28.2%	0.046	0.052
Honduras	9.0%	0.017	0.046
Ecuador	22.9%	0.105	0.035
Guatemala	15.2%	0.035	0.033
Dominican Republic	14.7%	0.667	0.028
Mexico	25.9%	0.161	0.027
Colombia	23.6%	0.014	0.016
El Salvador	13.2%	0.031	0.002
Bolivia	21.4%	0.011	0.000

Source: Compiled by the author based on IDB.

GRAPH 4.6 EQUITY AND RETIREMENT IN LATIN AMERICA
QUINTILE GAP FOR MEN AND WOMEN, 2014



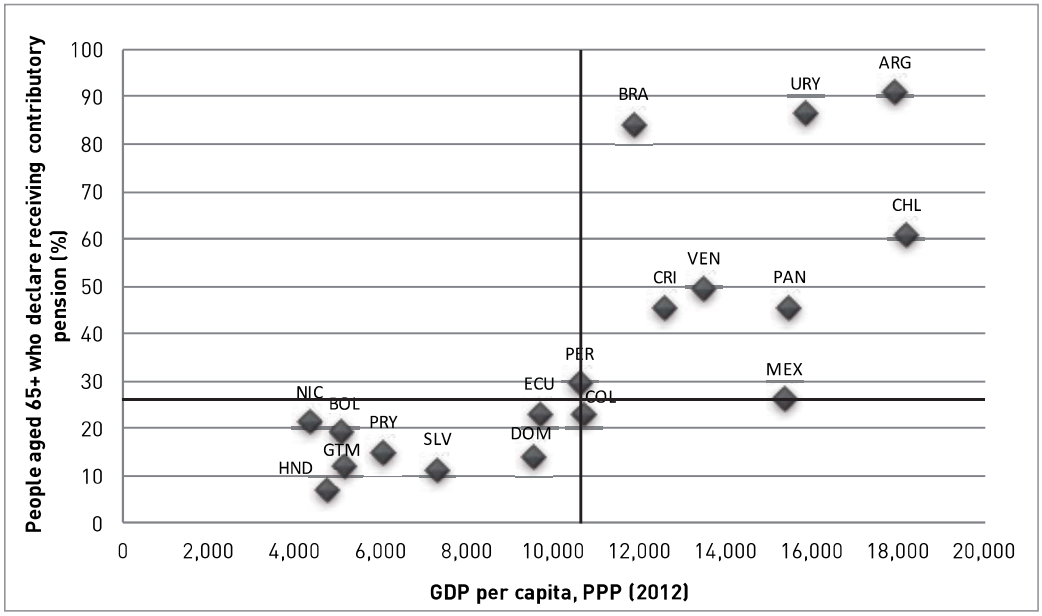
Source: Compilation based on IDB (https://data.iadb.org) 2014; except for Chile and Venezuela (2013) and Nicaragua (2012).

In terms of income, Uruguay, Brazil, Dominican Republic, Argentina and Chile have indicators for men that denote gaps higher than 0.6, meaning that the contributory pension of an older adult with lower income is up to 40% of that of a peer from the fifth quintile. By contrast, in Bolivia, Colombia and Honduras this gap is extreme. For example, in Honduras, the pension for an individual from the lowest quintile is below 2% of that of an individual from the higher income group.

This section concludes with two graphs showing the coverage and solidarity relationships of the pension systems in the region. This is obtained by using schemes with four quadrants where sectoral indicators are compared with the values of per capita gross domestic product of each country.

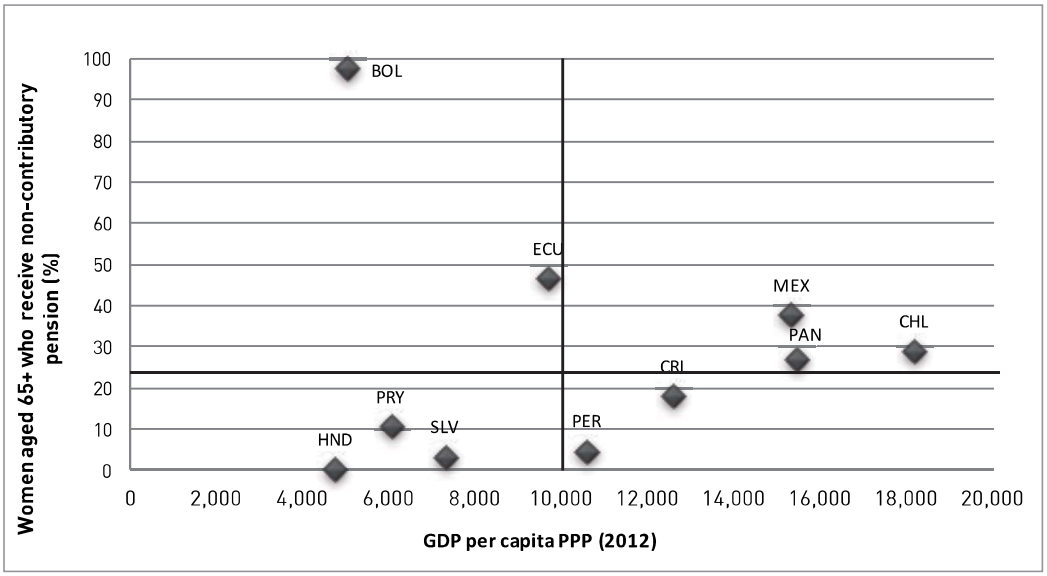
The first (Graph 4.7) shows a positive correlation between income and population covered by a contributory pension, while the second (Graph 4.8) shows the same trend in terms of women with non-contributory pensions. The link in the first indicator is particularly strong, considering that all the countries are located in the upper-right or the lower left quadrants, with no exceptions. In other words, there is an observed level of deterministic structure between economic capacity and formal financial protection to older adults. By contrast, Bolivia stands out in the second Graph, showing a level of non-contributory income above the expected value for women, considering its level of economic development.

GRAPH 4.7 LATIN AMERICA
WEALTH AND POPULATION WITH CONTRIBUTORY PENSION



Source: Compiled by the author based on IMF and IDB (https://data.iadb.org).

GRAPH 4.8 LATIN AMERICA
WEALTH AND WOMEN (>= 65 YEARS) WITH NON-CONTRIBUTORY PENSION



Source: Compiled by the author based on IMF and IDB (https://data.iadb.org).

5. Health Care Coverage Systems in Latin America

5.1. Regional Parameters

By 2012, ten countries in Latin America and the Caribbean had higher levels of spending than the regional average of PPP US$821 person/year, showing a general positive association between economic wealth and level of investment in health care. Bahamas leads in Table 5.1, with $2,377 per person per year, while Brazil invested $1,109 for the same period. The countries with the lowest annual expenditure per capita are Bolivia with $305, Guyana with $223, and Haiti with $84, nearly ten times less than the regional average, and 28.3 times below the leader in health care expenditure in Latin America and the Caribbean.

This, however, does not necessarily reflect different levels of investment as a percentage of GDP. As the fourth column of Table 5.1 shows, nations with different levels of spending per capita may have similar participations of the health care sector in the total product. Such is the case of Argentina, Cuba and Nicaragua, where the participation of the sector is approximately 8.6% of the total, which is above the regional average of 7.07% of the product, although the indicators of spending per capita and results may vary. This is the case of Costa Rica and Paraguay, the only two nations that exceed ten percent of the product associated with the health care sector.

Table 5.1 Latin America
Socioeconomic and health indicators
(circa 2012)

Countries	GDP per capita USD PPP[1]	Health spending per capita USD PPP[2]	Total expenditure on health (% GDP)[3]	Public expenditure on health (% TEH)[4]	Out-of-pocket expenditure on health (% TEH)[5]	Child mortality rate[6]	Measles immunization (%)
Bahamas	33,324	2,377	7.52	46.07	29.11	13.9	90
Barbados	25,043	1,307	6.29	65.59	34.41	16.9	93
Trinidad and Tobago	19,911	1,450	5.44	50.37	41.96	18.4	92
Chile	18,182	1,606	7.18	48.59	32.15	7.8	91
Argentina	17,917	1,551	8.49	69.2	20.11	12.7	93
Uruguay	15,865	1,427	8.9	66.62	16.53	6.2	95
Panama	15,468	1,260	7.59	68.62	24.8	15.9	97
Mexico	15,344	1,062	6.15	51.81	44.08	13.9	98
Venezuela	13,480	628	4.65	33.69	63.69	13.1	86
Costa Rica	12,594	1,311	10.13	74.62	23.09	8.6	83
Suriname	12,472	521	5.88	57.02	10.12	18.5	85
Brazil	11,876	1,109	9.31	46.42	30.95	12.9	97
Cuba[7]	11,060	405	8.59	94.15	5.85	4.3	99
Colombia	10,697	723	6.83	75.78	14.76	15.1	88
Peru	10,596	555	5.07	58.92	35.72	14.1	96
Ecuador	9,682	652	6.4	44.84	51.38	19.8	98
Dominican Republic	9,547	553	5.42	50.92	38.71	22.8	79
Jamaica	8,916	461	5.93	54.87	28.93	14.4	88
Belize	8,598	458	5.81	64.9	24.49	15.7	98
Guayana	7,755	223	6.56	66.06	31.34	29	98
El Salvador	7,316	475	6.71	62.8	32.39	13.6	89
Paraguay	6,053	633	10.32	42.03	53.33	18.8	93
Guatemala	5,153	346	6.74	35.63	53.33	26.5	87
Bolivia	5,041	305	5.77	71.75	23.23	32.8	84
Honduras	4,744	354	8.6	50.31	45.55	19.4	99
Nicaragua	4,352	335	8.23	54.28	39.14	20.6	99
Haiti	1,260	84	6.44	22.83	34.8	56.6	59
Latin America	**11,861**	**821**	**7.07**	**56.62**	**32.74**	**17.9**	**90.89**

Source: Compiled by the author based on IMF (1), WHO (2, 3, 4, 5) World Develpment Indicators, World Bank (6), and *The Economist* (7) data.

Despite this, there is a certain inverse correlation between income, health care expenditure and results (although with some exceptions), measured in terms of infant mortality. This pattern also has exceptions: nations with relatively high levels of spending in health care may not show corresponding rates of infant mortality, while nations with lower economic development, with lower per capita expenditures

in health care, have more positive results in health care than expected. An example of the latter case is Cuba, whose infant mortality rate is 4.3 per 1,000, but whose expenditure is similar to Jamaica's, which is 3.5 times higher.

In addition, the vaccination levels in the region show positive percentages, regardless of the levels of spending and income. With a few exceptions, measles coverage is at an average of 91%. This reflects a regional strategy that has prioritized this intervention, regardless of the indicators of wealth, spending capacity and institutional changes.

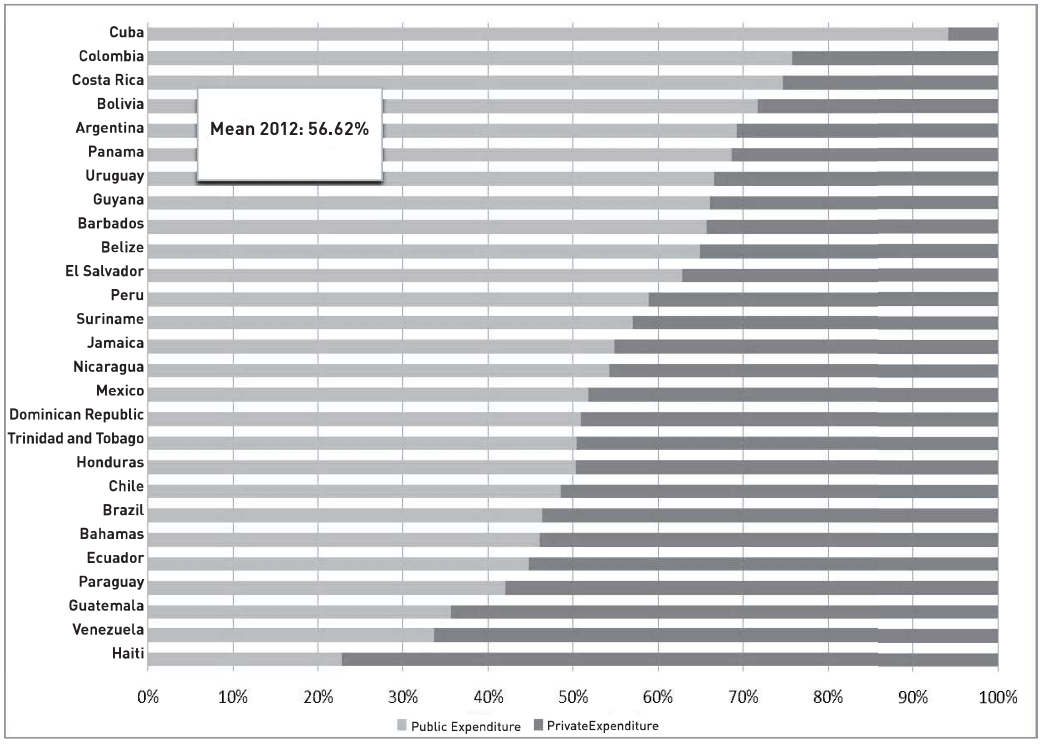
Furthermore, the decisions of how much to invest in health care and to what extent is the public sector to participate in this financing function show a significant correlation, and so do traditional indicators of health care results. In general, greater public participation results in a lower impact of health care expenditure on family finances, and thus a lower weight of payment capacity over the use of services[1]. This relates to the financial —and institutional— capacity of countries to set priorities in public investment, reducing the risk of direct out-of-pocket expenditure by families, which may be considered as the clearest indicator of equality (or lack of equality) in a system of social insurance in health care.

According to the information provided in Graph 5.1, the State's participation in the financing of the health care sector in the region has increased slightly, rising from 54% of the total by 1995 to 56.61%, according to information in 2012. Furthermore, unlike the percentages observed a decade ago, the allocation of public or social funds to the health sector in some of the countries with lower relative economic development has increased, representing a positive development from a perspective of equality. Such is the case —particularly— of Bolivia, in addition to Guyana, Belize, El Salvador and Peru. Despite this, several of the nations that are most in need still show high percentages of expenditure coming directly from families

Graph 5.2 shows a moderately negative trend line between total health expenditure (2012 $PPP) and the participation of out-of-pocket spending in that total expenditure. This suggests that there is a greater tendency towards a system of greater relative equality (lower out-of-pocket spending from families) in relatively richer nations.

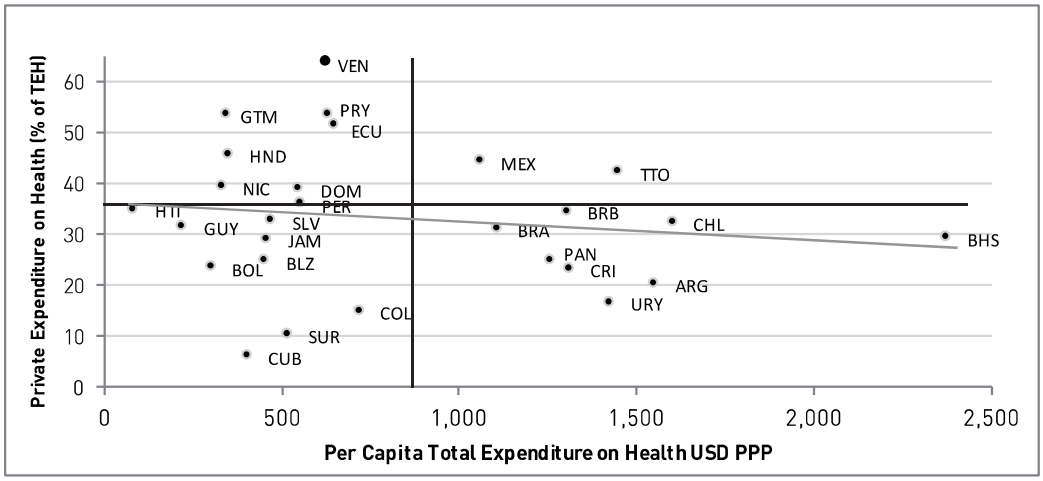
[1] Besides the out-of-pocket spending from households, private financing is made up of wage deductions for the payment of premiums in private insurance plans, as well as the contribution of non-governmental donations and the presence of NGOs in the provision of free services. Increased weight of these institutions reduces family expenditures, regardless of the capacity of public financing.

GRAPH 5.1 PARTICIPATION OF PUBLIC AND PRIVATE EXPENDITURE IN TOTAL EXPENDITURE ON HEALTH CARE, 2012



Source: World Development Indicators - World Bank.

GRAPH 5.2 PER CAPITA TOTAL EXPENDITURE ON HEALTH (USD PPP) AND OUT-OF-POCKET HEALTH EXPENDITURE (AS % OF TOTAL EXPENDITURE ON HEALTH), 2012

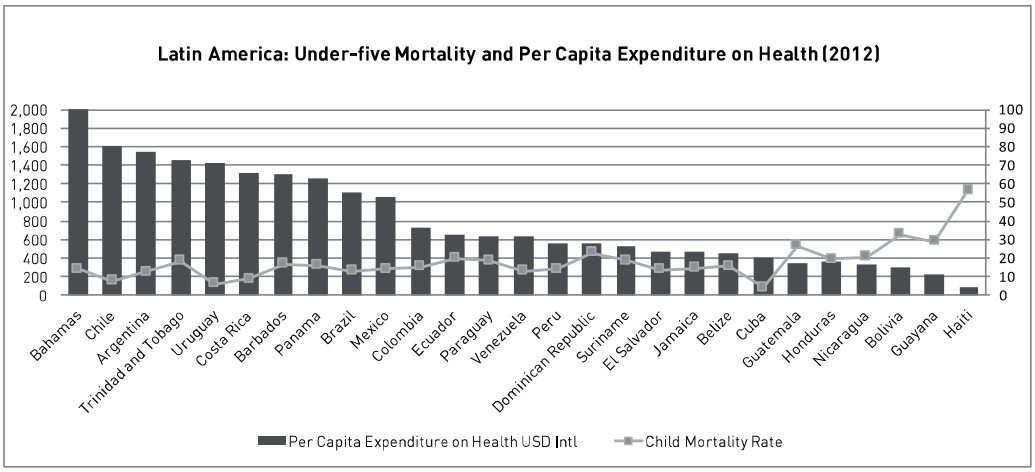


Source: World Development Indicators- World Bank.

The four quadrants show, on the lower right, the nations with greater total expenditure per capita in health care and lower out-of-pocket spending, as compared with the regional average, with Argentina, Costa Rica, Panama and Uruguay, and the Bahamas, with Brazil and Chile in the upper limit of this range. Meanwhile, the upper opposite quadrant shows the countries with lower total spending and higher direct participation of families.

Finally, Graph 5.3 shows the relationship between health care and financial indicators for Latin America and the Caribbean towards the end of the last decade. This shows the association between public spending in health care and infant mortality rate.

GRAPH 5.3 LATIN AMERICA
UNDER-FIVE MORTALITY AND PER CAPITA EXPENDITURE ON HEALTH, 2012



Source: World Development Indicators.

There is an observed significant gap in the total health care expenditures by nation, as well as a correlation between the investment made and the results achieved by the system. In any event, this correlation is not perfect, suggesting that countries with a more efficient use of the funds allocated to health care can achieve relatively positive results, regardless of the extent of such investment.

This insight reveals the need to identify not only the amounts allocated to health care spending, but also the mechanisms through which such funds are administered throughout the vertical chain of the health care system of each country. Moreover, this provides grounds for a debate on the role played by the Latin American State to equitably address the health care needs of its population.

For this reason, the following section proposes to analyze the organization of a group of Latin American health care systems, taking the study of horizontal and vertical dimensions as a pivot. This will make it possible, from a perspective of social security, to identify differences in terms of their functions of financing, insurance, management and provision in each case, within a generally segmented context.

5.2. National Cases

Argentina's health care system is characterized by decentralization in its insurance and financing mechanisms, leading to extensive coverage of the sector. The Ministerio de Salud de la Nación (MSN) is the national governing body in charge of supporting a group of federal programs (vaccines, drugs, primary care) that account for 18% of total public spending in health care. However, the financing and the management of the public services network (provincial, regional and municipal hospitals), along with its related health centers, are not within its jurisdiction. All of them are under the jurisdiction and ownership of the 24 Provincial Ministries of Health (MSP) and the Municipal Secretariats of Health (SSM) of the decentralized provinces (Buenos Aires, Córdoba, mainly, and Santa Fe).

Together, there are six hundred sub-national institutions that are responsible for defining at a local level the strategies of provincial action, which are financed with their own resources (provincial budgets), with limited budget participation of the national government. The Consejo Federal de Salud (Cofesa) is the meeting space for the provincial health care authorities, but its resolutions are not formal policy decisions, but rather suggested guidelines for action. The provincial health care authorities finance the services that offer free coverage to 34% of the country's population, particularly to the lower income groups where people do not have a formal job.

Two autonomous federal institutions stand out as key actors in the country's social security: the Programa de Asistencia Médica Integral (PAMI) and the Superintendencia de Servicios de Salud (SSS). PAMI is the social security fund with the greatest coverage in the country (7% of the population) and is responsible for guaranteeing care for retirees and pensioners. Its management is centralized and operates by hiring individual and hospital providers (public and mainly private) throughout the country.

For its part, the SSS is the governing body of a network of 300 social security institutions (Obras Sociales Nacionales —OSN) that are organized by branches of productive activity (trade, construction, etc.) throughout the country and provide health care coverage to members and their relatives (35% of the population) through both employer contributions and wage contributions. Contributions are transferred to each OSN from the Administración Nacional de Seguridad Social (Anses) after a deduction of resources to support the financing of such a high complexity (Sistema Único de Reembolso—SUR) and the management of the Fondo Solidario de Redistribución (FSR). This fund ensures the transfer of solidarity resources among OSNs to cover a Mandatory Medical Program (PMO), which is defined by the SSS and has wide coverage. Except for some cases, OSNs do not have their own providers, so they have to hire public and, especially, private providers.

A third group of social security institutions is made up of 24 Obras Sociales Provinciales (Ospr), which provide comprehensive coverage to public employees of each province and their families (14% of Argentines) through contributions from provincial governments in their role of employers, and wage contributions from workers. The provision of services is channeled through private providers that are managed by intermediary institutions.

Finally, 8% of the population, largely concentrated in higher-income groups, is covered by private prepaid health companies that fall under the regulatory jurisdiction of the SSS.

Bolivia's Ministerio de Salud y Deportes (MSD) rules, at a national level, over the Servicios Departamentales (Sedes) —directly depending on it— and the delegates in the Prefectures, and, at the local level, over the Directorios Locales de Salud (Dilos), the health care facilities, and the mobile operational management brigades. Together they account for the coverage of 30% of the population, with financial resources from the National Treasury. The subsector of traditional medicine, officially represented since 2006 by the Vice-Ministry of Traditional Medicine and Interculturalism, serves 10% of Bolivians, mostly rural residents.

In the 1990's, Bolivia undertook a strategy to expand health care coverage through subsidy schemes designed for specific social groups and managed by the MSD. In 1996, the Seguro Nacional de Maternidad y Niñez (SNMN) was launched, and it later expanded in 1998 with the design of the Seguro Básico de Salud (SBS). In 2003, the SBS became the Seguro Universal Materno Infantil (SUMI), which is the basis of the current free public insurance. The beneficiaries of the SUMI are children under five years of age and women in reproductive age.

The introduction of the Participación Popular Act in 1998 initiated a process of decentralization of management and financing if prefectures and municipalities. Recently, the MS has proposed to advance in the establishment of networks of services based on a perspective of collective health with an intercultural approach. In this context, the current public health insurance is financed with public funds per capita allocated to municipalities, which pay providers according to rates established by the MSD. The MSD also offers care to people without informal employment through the Seguro de Salud para el Adulto Mayor (SSPAM), using municipal resources from the Impuesto a los Hidrocarburos tax (IDH).

For its part, the Extensa Program has jurisdiction over the rural areas through health brigades (Brisas) that work jointly with community health agents (Asistes) in isolated communities to reduce the barriers that prevent access to the indigenous population.

Similarly, employees in the formal sector have the Seguro Social Obligatorio (SSO), which is managed by the Cajas de Seguridad Social, which are coordinated, in turn, by the Instituto Nacional de Seguros de Salud (Inases) and funded with government contributions as a contracting party, contributions from workers in the formal sector, and contributions from employers. Together, they provide common risk insurance and cover benefits for occupational hazards (disease and accidents), disability and death.

The Caja Nacional de Salud (CNS) is the largest social security institution in Bolivia, with 90% of the population of the sub-system, followed by the Cajas de Petroleros, the Bancas Privadas y Públicas, the Caja de Caminos, the Caja Boliviana de Fomento (Cordes), the Caja del Seguro Militar, and eight Cajas Universitarias. The central

government appoints their authorities, and their budgets are part of the consolidated National budget.

The institutions of provision of services operate with fixed budgets, and the modalities of private contracting are uncommon, covering high complexity treatments. Each of the funds (cajas) has its own autonomous management, collecting its own contributions and operating a centralized management of resources.

The private sector accounts for a third of health care expenditure and serves 10% of the population, and it comprises both for-profit and non-profit insurance companies and providers that operate on the basis of out-of-pocket payments or contracts with the MSD. Thirty per cent of the population does not have access to institutional services, making use of traditional medicine services paid directly from their income.

Brazil's health care system hinges on the Unified Health Care System (SUS), and its services were decentralized in 1988 towards the states and their municipalities, with the federal Ministry of Health (MS) keeping the role of national administrator of the SUS. The federal government is responsible for defining priorities and monitoring compliance, and it participates in the financing nearly two thirds of the tripartite expenditure (federation, states and municipalities).

Each municipality has the primary responsibility in the provision of health care services, while the management of SUS oversees the health secretariats of the state governments. Aside from the universal access model run by the public sector (SUS), there is a model restricted to public workers (civil and military) that is financed with public resources and contributions by employees.

Public financing of Brazil's health care model accounts for nearly 48% of total health expenditure, and it comes from general taxes from the three government levels, which are deposited in special accounts (Fondos de Salud) for each level. Each of the administration levels must devote a minimum of 15% of its budget to health care spending, with a growing participation of the sub-national levels through time.

The Pacto por la Salud (2007) introduced significant changes to the mechanisms of transfer of funds to states and municipalities, establishing a floor of basic care (BAP): divided into fixed BAP, monthly capital automatically transferred to each State Fund from the FNS in proportion to its population, and variable PAB, which is associated with state accession to certain actions. This is supplemented with various financing blocks for the various health care areas: outpatient care of medium and high complexity, epidemiological surveillance, pharmaceutical assistance, and assistance to management.

PAB is the first instrument designed to reduce health care disparities through homogeneous transfers based on the population. The Programa de Salud de la Familia (PSF) was introduced as a supplement to offer primary care services with a multidisciplinary team to specific population groups. By 2005, the program established in

1993 was being executed in nearly five thousand municipalities, covering 50% of the country's population.

While the SUS was created as an exclusive fund, there is a private sector offering health care to 25% of the population. It is estimated that only 28.6% of the population exclusively uses SUS, 61.5% are non-exclusive users, and 8.7% are not users.

The private sector offers, primarily, a set of providers to which people go as private individuals and pay from their pockets for each service, either through the network of medical and hospital care partnerships of the SUS, involving non-public institutions in its coverage plan, or through insurance schemes known as Salud Suplementaria (Sams), which are financed with resources from the families who join voluntarily, or from companies (Planes Auto-administrados).

Despite the cost-free status and universality of coverage of SUS, nearly 21% of Brazilians have a private insurance plan (Ministerio da Saúde 2008). In the South East of the country, 32% have private insurance plans, while in the northern and northeastern states, the figure is below 9%.

Chile's health care model was a pioneer in combining supply subsidy schemes through the traditional public structure with demand subsidy schemes, which are organized through social and private insurance programs. The Ministry of Health is the health authority in charge of controlling the system and establishing policies, and the regions have the Secretarías Regionales Ministeriales (Seremi) de Salud, whose levels of delegation of tasks have been increasing. The provision of health care in the public sub-sector is the responsibility of the Sistema Nacional de Servicios de Salud through its own Care Networks (Redes Asistenciales), which are funded with tax contributions from the national treasury, and municipal and communal taxes.

The social security system —Fonasa— and the Isapres (the private health care insurance providers) receive compulsory contributions from the working population with whom they have a relationship of dependence, the bonds and tariffs imposed by the insurance system to public and private hospitals, and the direct contributions from the State to the Fonasa for lower income groups, accounting for 45% of their income. Fonasa is an autonomous and decentralized public agency that manages the public fund as a distribution scheme offering equal benefits regardless of the level of contribution and family size. For its part, the Superintendencia de Salud controls the Isapres and Fonasa, and monitors the providers of health care services.

Both active and passive workers who affiliate to the health care system contribute to the Fondo Nacional de Salud (Fonasa), and in those cases the care is provided by the public system, or else they are referred to an Institución de Salud Preventiva (Isapre). The homeless and non-contributors are served by Fonasa through a contribution by the State. The social security contribution ensures a common ground for care (Modalidad de Atención Institucional, MAI), offering the option of Modalidad de Libre Elección (MLE), after the payment of bonds that are tiered by income levels. In 2006, Fonasa covered 76.9% of the population, having a greater proportion of women

and elderly people affiliated to the private system. In 2006, 5.1% of the population were not covered at all.

Private insurance offered by the Isapres operates on the basis of individual contributions, having institutions that offer the possibility of voluntary affiliation (open Isapre). These companies offer plans that are unattractive for high-risk individuals, thus enabling an adverse selection against Fonasa. The providers hired are the clinics, hospitals and independent professionals that cater to both the people insured by the Isapres and the contributors of the free choice public system (MLE).

During the last decade, the Chilean health care system introduced legislation to formalize a General Scheme of Guarantees in Health Care (GES) that provides financial protection, opportunity, access and Quality in a set of 66 (originally 25) prioritized pathologies in health through a universal Health Care plan (former AUGE), receiving incentives for compliance (it offers and Additional Financial Coverage, CFA), and facilitating the definition of co-payments by Fonasa group, up to a maximum of financial coverage assurance.

The reform of **Colombia**'s health care system in 1993 —amended in 2007— created a social insurance mechanism based on an explicit package of services, the Plan Obligatorio de Salud (POS). This model is coordinated with a structure of subsidy of the supply, which is managed by the national health authority. This institution is the regulating body of the sector, delegating to the departments the responsibility of managing the state resources, hospitals and care centers, which are part of the supply of the social security system. As of 2009, the Consejo Nacional de Seguridad Social en Salud (CNSSS) was replaced in its regulatory role by the Comisión de Regulación en Salud (CRES).

For its part, the Superintendencia Nacional de Salud (SNS) is responsible for the activities of inspection, monitoring and control of the actors in the system. The departments and municipalities have local health care offices that focus on monitoring the health care system of their respective jurisdictions.

Funded by employer and wage contributions from formal workers, the social security scheme has two modalities: the contributory scheme and the subsidized scheme, with the latter receiving a small basket of services (POS-S). The social security contributions are received by the Entidades Promotoras de Salud (EPS), which are private entities that manage the funds of the contributors who opt for them and deposit the differences between the contributions and the premiums that fund the contributory POS for contributors in the Fondo de Solidaridad y Garantía (Fosyga).

In 2009, there were 37 EPS in the contributory scheme, 25 EPS in the subsidized scheme, and 22 Cajas de Compensación Familiar, which play the same role as insurers, with the function of organizing the affiliation of people and managing the health care services of the Plan Obligatorio de Salud (POS).

The subsidized scheme, aimed at the lower-income population, operates on the basis of a cross-subsidization of the contributory scheme coupled with tax funds from

general taxes. Admission to this scheme requires that its beneficiaries be chosen through a Beneficiaries Identification System (Sisben), where people are categorized into six levels of poverty.

The Sistema de Seguridad Social separates the functions of insurance, administration of financial resources, and provision of services. The EPSs of the contributory or subsidized scheme hire the provision of health care services from the Instituciones Prestadoras de Servicios de Salud (IPS), which can be public or private, offering their services in various modalities: retrospective per event, prospective per diagnostic group, and sometimes through capitation for providers of certain services.

In any case, people affiliated to the Contributory modality make co-payments. The contributory scheme covers actions of promotion of health and prevention, diagnosis, and treatment of the disease and medicines. The subsidized scheme excludes second and third level actions, except for the care of children under one year of age and pregnant women

In 2010 the coverage of the Contributory Scheme was 39.7% and the coverage of the Subsidized Scheme was 51.4%, and only 4.3% of the population remained outside the system of social security in health care. The exclusively private sector is used by the higher-income population as a mechanism of double insurance or private consultation. Alternatively, families that lack coverage or do not have timely access to SGSSS are compelled to go to a private service and pay from their pockets.

Costa Rica's health care system has achieved the coordination of the two major sectoral actors: the Ministerio de Salud (MS), which rules the health care model, and the Caja Costarricense de Seguro Social (CCSS), an autonomous institution responsible for financing, purchasing and providing most health care services. For many years, Costa Rica has been the only regional experience of universal coverage regardless of payment capacity, which is organized through local care networks with national reference.

Since the 1960's, Costa Rica unified coverage of health care services by transferring all hospitals to the CCSS. During the 1980's, various modalities were introduced to include the non-salaried population, with participation of the MS, and then it started to be directly managed by the CCSS. Starting in the 1990's, the MS focused on the functions of regulation, transferring to the CCSS the programs of primary care, immunizations, etc.

The Ministry of Health (MS) has a public health office that relies on a network of operating units at the regional and local levels for epidemiological monitoring and control. The CCSS is financed with contributions from affiliated people, employers and the State, and it manages three schemes: sickness and maternity insurance (SEM), disability, old age and death insurance (SIVM), and a non-contributory scheme that provides coverage to those who have no payment capacity at all due to their poverty or disability status. The State contributes to the health care system with resources from the Treasury through the Fondo de Desarrollo Social y Asignaciones

Familiares, as well as with specific tariffs on the activities of electronic lottery and the sale of cigarettes and liquor.

The CCSS runs a national network of health care services, consisting of three levels of care and seven programmatic regions. The first level involves the Equipos Básicos de Atención Integral de Salud (EBAIS), whose responsibilities include promotion, prevention, and minor complexity treatment. The second level includes specialized consultation and hospitalization, and the third level provides complexity hospitalization through national specialized general hospitals. Starting in 1997, the CCSS distributed resources through per capita fees supplementing historical budgets based on management commitments, thus establishing annual performance targets for EBAIS, clinics and hospitals.

Until the 1990s, the private sector did not have significant development in Costa Rica. However, the increasing costs and the flexibilization of the labor market, among other elements, resulted in a decrease in the capacity of public spending, leading to a growing participation by the private sector. According to ENGAS (2006), 31% of the population acquired health care services in the private sector at least once a year, regardless of their affiliation to the CCSS. As a result, there are now clinical services, private physicians, hospitals, and cooperatives (non-profit organizations hired by the CCSS) that are directly financed with pocket payments. Only 2% of households have a private insurance plan provided by five insurers.

El Salvador's health care system is headed by the MSPAS (Ministry of Public Health and Social Assistance) and is organized in three levels: higher, regional and local. The first level includes the Secretaría de Estado, the health care regulating body that oversees the management of the allocated resources. The sub-national level is made up of the Direcciones Regionales, the administrative bodies of the Sistemas Básicos de Salud Integral (Sibasi) that are responsible for overseeing the management of hospitals. The local level is made up of the operational network of the Sibasi: hospitals and public centers. Based on the structure of the supply, the model does not establish a specific package of benefits to cover.

The financing of the MSPAS comes from resources of the central government and the Programa de Recuperación de Costos, which receives the payments of the users who make use of the facilities of the public system, particularly in secondary and tertiary care hospitals. In 2004, the Fondo Solidario para la Salud (Fosalud) was created as a financially and budgetarily autonomous institution dedicated to developing special programs with resources from specific taxes on tobacco, alcohol, and the regulation of firearms.

The ISSS (Instituto Salvadoreño de Seguro Social) is an autonomous body attached to the Ministry of Labour and Social Welfare that is responsible for ensuring health care and pension coverage to the population dependent on formal employment. The Seguro Social covers the risks of disease, common accident, employment injury, maternity, disability, old age, death, and involuntary unemployment of its workers and —with certain restrictions— their families. Its funding comes from employer contributions, wage contributions and direct transfers from the Estado Nacional.

Other institutions with similar structure are the Instituto Salvadoreño de Bienestar Magisterial (ISBM) and Sanidad Militar.

For its part, El Salvador has developed, like other Central American nations, systematic schemes for hiring NGOs to expand coverage of the rural and low-income population with public financing from the international credit. They offer medical and preventive services and hospitalization services in the capital city, and the main hospital of this kind is Pro-Familia hospital. As a result of the limitations of the Salvadoran public coverage, out-of-pocket spending is high, accounting for half of the total spending on health care, and with a rising trend. The presence of private health insurance providers is limited.

The Ministry of Public Health and Social Assistance is the governing body of health in **Guatemala**. However, the General Decentralization Act and the Municipal Code delegated to the Municipalities the task of health control and administration of public health care services. The public sub-system is financed with tax revenues, and a 20% is funded with recovery fees through public providers. In addition to supporting the provision of services in the public primary care network, the MSPAS hires NGOs to provide basic services in rural areas, involving the payment of per capita fees associated with a basic consumer basket of maternal and child care interventions. Secondary care services are provided by the Centros de Salud and the Centros de Atención Integral Materno-Infantil (CAIMI). Tertiary care services are provided by district, departmental, regional and national referral hospital centers.

The Instituto Guatemalteco de Seguridad Social (IGSS) offers health care protection to 18% of the population, mainly people in urban areas who are linked to formal employment, and it is financed with contributions from employers, affiliated workers and the State, providing coverage to salaried workers and their families (including children of up to five years of age).

The Institute operates primarily with three programs: the Disability, Old Age and Survival program (IVS), the Accidents program (PA), and the Sickness and Maternity program (PEM). The provision of benefits is concentrated in the facilities of the IGSS and implemented by their own medical staff. Additionally, the IGSS has made agreements with the MSPAS and with private physicians as providers for specific cases. However, the population affiliated to IGSS uses private hospitals in the same proportion as the hospitals operated by the IGSS, indicating double coverage with private insurance.

The total effective joint coverage of the IGSS and the MSPAS is 48%, while for-profit providers operate through individual consultations, providing care to 18% of the population. Private insurers cover less than 8%, focusing on high-income groups residing in urban areas. For their part, non-profit civil society and/or religious organizations have presence in rural areas. According to the Ministry of Health, one-third of Guatemalans use traditional indigenous medicine and, although it operates in the framework of community structures, it also functions on the basis of out-of-pocket payments.

The national survey of living conditions (Encovi, 2000) identified that, faced with a health care need 60% of the population of the poorest sectors resort to self-medication. In 2001, the Social Development Act defined the Social and Population Development Policy, giving way to a series of initiatives aimed at specific population groups: facilities were established to attend obstetric emergencies in places at risk, the National Reproductive Health Program, and the coverage of the maternity and common disease schemes offered by the social security program was expanded.

Honduras' Secretariat of Health (SS) is the governing body of the Honduran system, assisted by the Consejo Nacional de la Salud (Consalud), for the coordination of the sector, and the Consejo Consultivo de la Calidad (Concass), among others. Administratively organized in 18 departmental regions and two metropolitan regions, the SS receives resources primarily from the National Treasury, with additional funds from donations.

The health care structure of the country is divided into three levels. The first level includes rural health centers (Cesar), health centers with a physician and a dentist (Cesamo), maternal and childcare clinics (CMI) and peripheral emergency care clinics (Cliper). The second level includes departmental hospitals and regional referral hospitals, and the third level comprises the national hospitals. It is estimated that 45% of the population turn to the SS as a first option for care, and 17% of Hondurans do not have regular access to health care services.

For its part, the Instituto Hondureño de Seguridad Social (IHSS) is a decentralized institution that provides coverage to formal workers, offering maternity services for indirect beneficiaries, and care to children of up to 11 years of age. Its resources come from contributions by employers, wage contributions and funds from the State.

The IHSS implements its health care actions through several programs, including the Régimen de Enfermedad y Maternidad (REM) and the Régimen de Invalidez, Vejez y Muerte (RIVM). It covers 18% of the population. It has its own facilities for secondary and tertiary care, particularly in the two major cities of the country, so it hires a large part of the benefits it offers with primary care doctors and private and public clinics.

In 2003, the IHSS launched the program "Sistemas Locales de Seguridad Social" (Siloss), which is aimed at expanding health care coverage within the country. It operates through contracts the IHSS signs with public and private services, funded with incentives in primary care, and with payments per service for the subsequent levels. The first level is defined through Equipos de Salud Familiar (Esaf).

The for-profit private sector is financed with out-of-pocket payments and through the sale of health insurance to 3% of the population. There are eleven health insurers, with growing participation, which are regulated by the Comisión Nacional de Banca y Seguros (CNBS). Finally, non-profit private providers, NGOs and religious congregations finance their activities with internal and external donations.

Mexico's public health system has two sub-sectors, one depending directly on the Ministry of Health (MS) and financed through tax resources, and a social security subsector that is organized in institutes associated with formal employment, whose resources come from wage and employer contributions (in some cases, with the government as employer).

The instruments used by the Mexican State to provide coverage to the population without social security are: the Secretariat of Health (SSA) —in the function of regulation and strategic planning of the sector—, the State Health Services (Sesa), the IMSS-Oportunidades Program (IMSS-O), and the Seguro Popular de Salud (SPS).

The SSA and the Sesa are primarily financed with resources from the federal government, state governments and recovery fees paid by users. These institutions have staff and facilities of their own that are included in the federal and state budgets, focusing on the care of the population without coverage. For its part, IMSS-O is financed with resources from the federal government, and it provides primary and secondary outpatient and maternal and child services in the facilities of the IMSS to the rural population without access to public services.

In 2004, the Sistema de Protección Social en Salud (SPSS) and the Seguro Popular (SPS) programs were introduced, designing a mechanism of voluntary insurance for the population through a basket of benefits that are co-financed with federal and state contributions, and an advance payment according to the level of income.

The target population of the SPS are low-income people without employment, self-employed, and who are not benefited by any social security institution. Before this, the 2.5 million uninsured families belonging to the poorest segments received only interventions of community and basic preventive health care through the program to "fight poverty" called Oportunidades. Starting in 2004, the families affiliated to the SPSS have access to medical, pharmaceutical and hospital services that meet their health care needs.

The SPSS evaluates applicant families through the Módulos de Afiliación y Orientación (MAO) to determine the family fee to be paid according to their economic status and register them into the program.

In addition, the social security actors include the Instituto Mexicano del Seguro Social (IMSS), the Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE), and Petróleos Mexicanos (Pemex). They provide services to formal workers and their families through their own integrated management and provision structures, offering primary, secondary and tertiary care without restricting to a defined package of services.

According to the ENIGH 2008 household survey, in 2008 40% of the population was not insured, while 60% reported having some kind of insurance. Of the insured people, 52.3% was covered by the IMSS (31.2% of the total), 10.6% by the ISSSTE (6.3%), 32.5% by the SPS (19.4%), 4.7% by other insurance plans (2.8%).

Nicaragua's Ministry of Health (Minsa), together with the Instituto Nicaragüense de Seguridad Social (INSS), and the medical services of the Ministries of Interior (Migob) and Defence (Midef), comprise the public health care institutions in Nicaragua.

Starting in the 1990's, the Minsa established 17 Sistemas Locales de Atención Integral en Salud (SILAIS), which are responsible for the decentralized management in departments and municipalities. Together with the EBA (Equipo Básico de Atención), the SILAIS define the financial needs of each municipality, establishing management commitments with hospitals, in line with the Local Plans in each jurisdiction.

By 2008, there was a planned transfer of public hospitals to the control of the SILAIS, ceasing to receive their budgets directly from the Ministry of Health. In addition, a community health care system was established, comprising networks of brigade members, midwives and voluntary workers that use the so-called "casas base" and "casas maternas" as health care centers, gaining prominence in the strategy of the Plan Nacional de Salud. According to the Política Nacional de Salud 2008 (PNS), 35% of the rural population still has no access to any public service.

For its part, the Instituto Nicaragüense de Seguridad Social (INSS) manages three programs: the Régimen Integral, which includes the Seguros de Enfermedad y Maternidad (EM), Invalidez, Vejez y Muerte (IVM), and Riesgos Progesionales (RP) insurance programs. These programs are used by workers in the formal, private and public sectors, spouses in pre and postpartum status, and children of up to 12 years of age. They cover 16.5% of the country's population, mainly in urban areas.

The financing of the public sector comes from general taxes paid to the National Treasury, the sale of services to the INSS, and international cooperation resources, whereas the INSS is financed with three sources: contributions by the State, employers and salary contributions.

The INSS does not own any facilities, hiring services funded through Instituciones Proveedoras de Servicios de Salud (IPSS) from the for-profit and non-profit public and private sectors. The INSS established a basic basket of services without comprehensive coverage, so that affiliates go to government facilities, or hire private services, for chronic diseases and high-cost events.

For the 2000-2004, the Household expenditure was 50.2% of total health expenditure, with a significant weight of self-medication costs. Starting in 2007, the Government defined the Modelo de Salud Familiar y Comunitario (MSFC) to foster preventive action, a family approach, and outside work. The introduction of the "cost-free policy" in January of the same year aligned with this initiative.

Peru's Ley General de Salud (LGS) defines the Minsa as the agency in charge of leading and managing the national health care policy. For the provision of health care services, the social insurance sector is divided into subsidized scheme, or indirect contributory scheme, and direct contributory scheme, which is the one that corresponds to social security. In the public sub-sector, the Government provides health care services to the uninsured population in exchange of a recovery fee of varying

amounts, and through the Seguro Integral de Salud (SIS) it subsidizes the provision of services to the population living in poverty, through the network of the Ministry of Health (Minsa).

The SIS is financed with resources of the general budget, having an estimated coverage for the Minsa system of 58% by 2008. It was created in 2001 as a decentralized public agency affiliated to Minsa with the mission of managing the funds allocated to financing health care benefits.

In 2007, the SIS began a restructuring process, expanding coverage to all the uninsured population through two components: the subsidized component for the poor population, and the semi-subsidized component for the population with limited payment capacity, formalizing a Priority List of Health Care Interventions (LPIS).

For its part, EsSalud provides coverage to formal workers, their families, and retirees of the system —approximately 20% of the population—, primarily located in urban centers. Its health care coverage is financed with employer contributions and contributions by active workers.

This contributory scheme is compulsory for all salaried workers, with the possibility, however, of choosing between having their funds managed by EsSalud, or by an Empresa Prestadora de Salud (EPS), which receives the contributions and manages the resources. When the insured person opts for the services offered by EsSalud (both outpatient care and hospitalization), all the contributions are allocated to that institution, but if the person opts for mixed services (EsSalud and EPS), the funds are distributed 60% approximately for EsSalud and the rest for EPS.

The EPS typically focus on primary care and low-complexity diseases, while EsSalud focuses on the complex levels. EsSalud is the provider of most of the health care services for those who do not opt for an EPS, although they also hire services from such private providers. Despite the progress achieved, 10-20% of the Peruvian population is excluded from the health care system.

In addition to the EPS, the private sector includes insurance companies and private clinics, medical centers and polyclinics, and providers of traditional medicine.

Uruguay's Sistema Nacional Integrado de Salud was established in 2008, based on the Seguro Nacional de Salud (SNS). It is managed by the Junta Nacional de Salud (Junasa), a decentralized agency of the Ministry of Public Health (MSP), with a Directory of workers, users and providers. The SNS is based on the Seguro de Enfermedad del Banco de Previsión Social (former DISSE, Dirección de los Seguros Sociales por Enfermedad), with funds from the Fondo Nacional de Salud (Fonasa) that come from salary and employer contributions. Fonasa includes public and private workers in the formal sector, and their dependents of up to 18 years of age.

Contributors choose an institution to manage their contributions and receive benefits hired by those institutions in the network of the Sistema Nacional Integrado de Salud (SNIS). In the case of public services, these managing institutions are the

Administración de Servicios de Salud del Estado (ASSE) or any of the Instituciones de Asistencia Médica Colectiva (IAMC), as full providers. The IAMCs were introduced during the previous regime as non-profit mutual funds with capacity to provide the benefits themselves or hire clinics, medical centers or individual professionals from the private sector.

As administrator of the SNS, the Junasa signs management contracts with comprehensive providers, paying a "cuota salud" fee for each beneficiary to the public or private institution chosen by the contributor. This fee is made up of two components: a common per capita fee established by the Junasa and adjusted for gender and age of beneficiaries, and a premium for the fulfilment of care provision goals.

The financing of the system comes from taxes that feed the network of institutions and public providers (MSP, Intendencias Municipales from Montevideo, and from the rest of the country, and ASSE). In addition, the public contributions finance specific social security institutions that are not included in the new system, such as Sanidad Militar and the Dirección Nacional de Sanidad Policial.

The public tax contributions coming from compulsory contributions finance the Fondo Nacional de Recursos (FNR), the institution in charge of regulating and managing resources for high-complexity treatments in the entire health care system in Uruguay. The provision of these services is made in public or private highly specialized medical institutions (IMAE). Finally, there are fees for private supplementary insurance companies and mobile emergency companies, which represent out-of-pocket payments and co-payments that supplement the social security contributions.

Today, there has been an increase in the sectoral resources associated with an increase in the employment contribution rates, and a redistribution of resources towards the institutions that depend on the Junasa. At the same time, the out-of-pocket spending from households has decreased.

5.3 Comparison of Experiences in Social Security for Health

A first insight that arises from the comparison of the selected health care systems is the existence in all cases of financing mechanisms based on the collection of funds from the labor market, as opposed to integrated public health systems. However, the relative weight of each of these social security institutions varies greatly, depending on the development of the formal employment market on which they rely significantly. In addition, there are significant differences among the coordination mechanisms of these social security institutions and the public systems that depend on the state budget.

At one end is Brazil, a country that is advancing in the search of a national model in spite of the great diversity of needs and health profiles. This country relies on a scheme that subsidizes supply, where the weight of the wage and employer contributions scheme is relatively low. At the other end, we can see Argentina and

Uruguay, which, although having significant differences from each other, support their health coverage on social insurance programs, with schemes to subsidize demand throughout the public sub-system.

In-between these two models is Costa Rica, where the structures of the Ministry of Health and Social Security coordinate tasks, providing uniform coverage to its population.

However, among the countries that rely on social security organizations, we can find differentiated strategies. The first one maintains the segmented tradition of the Latin American health care sector, associating a middle- and high-income class, mainly urban and with formal employment, with social security institutions that are relatively autonomous in the management of their health care resources.

Their resources per beneficiary are higher than those invested by the State through the Ministry of Health, which seeks to put first those who do not have formal alternative coverage or cannot have access to the private sector. This entity, which is typically atomized, comprises both independent professionals and practitioners of traditional medicine, leading to the coexistence of private insurance and direct consultations at pharmacy stores upon an episode of disease.

The quality of the regional reforms in the last decade shows two alternative approaches. One of them advances towards the establishment of consolidated national social health insurance schemes, which include incentives to providers and greater precision in the definition of management and provision roles.

With certain variations, Uruguay, Peru and Dominican Republic are moving in this direction, where there are the cases of Colombia, after the 1990's reform, and Chile, through the consolidation of guarantees of provision and a national fund for the sector. Showing characteristics associated with an atomized structure of social insurance funds and a deep federalism in the collection and use of resources, Argentina operates with this model. In all these countries, there is a clear definition of the roles in social insurance, which relies on public or social institutions, and the structuring of schemes to delegate and vertically outsource the management and provision of services between public and private subsectors.

It is relevant to note that in all these cases, the role played by social security institutions is paramount, but with varied responsibilities. The National Health Care Funds in Chile and Uruguay (in the latter, through the framework of the Junta Nacional de Salud), the Fosyga in Colombia, and to some extent EsSalud in Peru are critical to understand the coverage strategy, for those without formal affiliation and for the population with defined employment. In these cases, the social security institution undertakes the responsibility of designing the insurance plans and controlling the system, with defined spaces for action.

Argentina's Superintendencia de Servicios de Salud share some similar responsibilities with these cases in terms of the design of the insurance plan for the formally employed population. The activity of collection and distribution of funds, however,

depends on another institution, the Administración Nacional de la Seguridad Social (Anses), which is also responsible for the management of the retirement and contributory and non-contributory pensions systems.

A second sectoral strategy adopted during the last decade seeks to achieve greater coverage by proposing programs and subsidies based on the identification of priority population groups (by income, geography, ethnicity, age). Some of them have a massive scale and are managed by the public authority, such as the Seguro Popular in Mexico, or the redefined or recently adopted initiatives like in Bolivia and Panama, respectively. Other cases resort to public-private partnerships especially designed to provide basic packages of primary care in rural areas, like the cases of El Salvador and Guatemala. Again, the social security institutions of each country are responsible for critical interventions in each case, with relevant cases like the Instituto Mexicano del Seguro Social (IMSS), and its counterpart in the public sector (ISSSTE), the Caja Nacional de Salud in Bolivia, and the Social Security Institutes in each of the Central American nations.

Only a few countries maintain traditional segmentation models without incorporating mechanisms for prioritization of beneficiaries or consolidation of insurance models. In almost all cases, however, there are observed movements towards decentralization or de-concentration of services to sub-national levels. This is the result of greater democratization in decision-making, for one thing, and also in the need to coordinate regional responses to local needs, demanding improvements in the management of resources.

The new national conditions in health care systems provide grounds to identify a third possible factor to compare health care systems. It is related to the definition of groups of benefits that provide guarantees of rights to their beneficiaries in the social insurance systems, but there are no uniform criteria throughout the region.

In this respect, we can find systems with defined basic packages in primary and secondary care (Colombia), the structuring of guarantees to the treatment of selected pathologies based on the epidemiological profile of the country (Chile), or the design of specific financing mechanisms for high cost diseases and the structuring of comprehensive care programs (Argentina, Uruguay). The reforms linked to the achievement of greater access to priority groups also recognize the definition of packages, whether they are associated with mother-child programs, like those that provide a guarantee of basic interventions in rural areas.

The analysis of the regional health care systems clearly entails the need to identify the linkages between sub-systems that make it possible to guarantee access to services from a perspective of horizontal equity, where the payment capacity does not restrict access. Thus, the effectiveness of such systems not only rests on the definition of health care priorities and their availability of provision of benefits. It also requires an organized scheme of transfer and absorption of risk among groups, thus enabling a financially effective result, ensuring attention at the lowest possible cost.

In this context, the concept of social allocative efficiency in a health system aligns with the concept of equity to the extent that any additional investment of funds should be made in those interventions where the value of the marginal utility is greater. Allocative efficiency and equity are thus complementary approaches within a prioritization scheme in a health system.

Insurance mechanisms, and particularly social insurance mechanisms, take the way in which these two elements are articulated as the object of analysis. They refer to the system of collection and allocation of resources for the consumption of goods and services used in a context of uncertainty. The success of such mechanisms provides relevant lessons about the coverage (absolute and among groups) of the health care system, its financial capacity to meet the needs of the population and those that lead to the public policy priority scheme of the health care authorities.

It also provides lessons on the capacity of the State to articulate the interests and preferences of various social sectors, and its institutional ability to address the regulatory requirements of those systems where market failures, regardless of the political priorities of the moment, require intervention mechanisms.

In this context, the level of health care spending by households provides an indicator of success of an insurance system, as it shows the capacity of such mechanisms to provide financial protection to their population. This happens when the free health care coverage of the population with limited economic resources enables them to allocate household income to the consumption of other goods and services, thus constituting a supplementary "non-monetary income."

Furthermore, out-of-pocket spending reveals the efficiency of the system in controlling moral risk in the groups with financial capacity and the possibility of excessive demand. Hence the importance of characterizing both the mechanisms of collection and allocation of budgetary funds, and the criteria to identify priorities in spending.

Finally, the comparative analysis makes it possible to assess the governance challenges in the Latin American health care systems, as well as the need to design regulatory models that conform to the characteristics of the map of actors of each country.

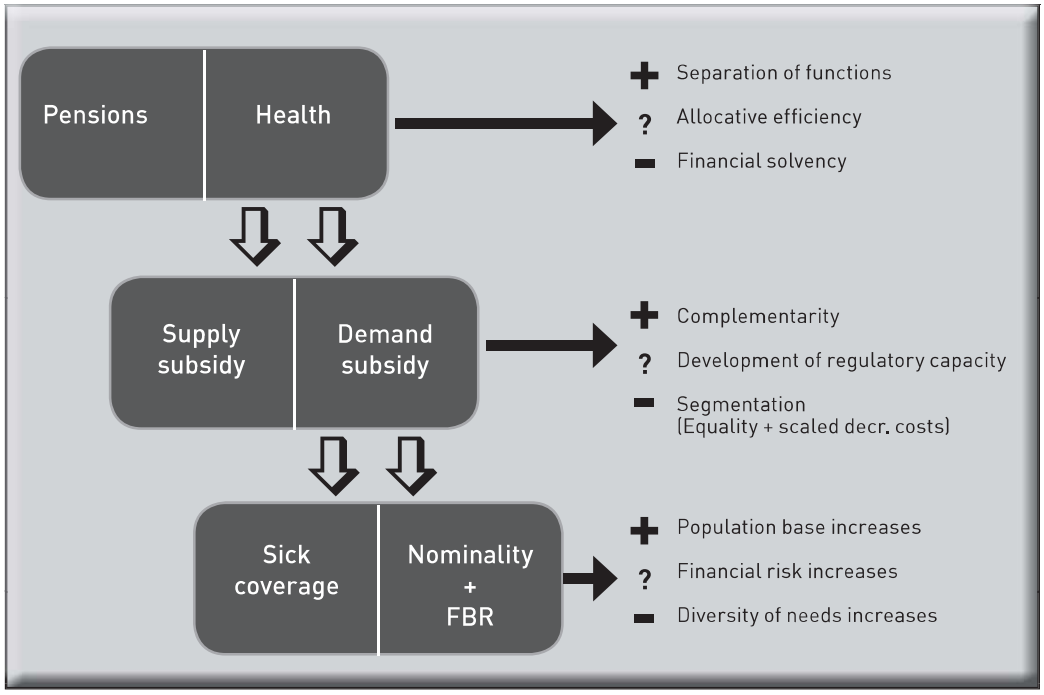
In line with Figure 4.1 in the previous section (related to the pension systems), the following figure (5.1) summarizes the sequence of changes in the health care systems in the region during the past years. First, the separation of the functions of retirement from those specific to health care coverage was aimed at providing greater financial solvency and capacity for monitoring the activities implemented in each branch of social protection. This phenomenon —showing varied occurrence among and within countries and institutions— brought about the challenge of the need to increase efforts in the management of resources.

The gap in health care coverage should have been addressed from that perspective, thereby enhancing the importance of mechanisms to subsidize demand,

which expanded with the new social insurance schemes for health care during the 1990s. The adoption of these instruments of intervention led to a revision of the traditional models to subsidize the supply, seeking greater coordination, considering that both models have advantages and disadvantages that require complementary efforts.

However, the prevalent segmentation continued to affect equality in access and relative quality among sub-systems, thus increasing the regulatory requirements that, as in the case of pensions, represent the main instrument to facilitate the efficient use of resources, and the participation of non-State sectors in the management and provision of services.

FIGURE 5.1 EXPANSION OF THE STRUCTURE OF SOCIAL PROTECTION FOR HEALTH IN LATIN AMERICA: BENEFITS, RISKS AND CHALLENGES



The current stage of health reforms calls for further coordination among sub-systems and complementarity between financing models. The pursuit of greater access has led to the inclusion of nominality in public care, both in general programs for the entire population and in the specific programs associated with priority groups. These mechanisms were accompanied with payment mechanisms based on performance (*result based financing*), an area of alignment between management and financing that requires evaluation efforts.

Furthermore, the greater coverage based on defined packages, the evolution of the sectoral epidemiological profiles, and the increased guarantee of rights has led to

the design of programs for specific diseases, particularly related to non-communicable diseases. While altogether this seeks greater and more effective care, the diversity of needs to be covered defies the mechanisms for the definition of priorities by the health authority.

This movement has created a space of judicialization of health, further increasing the financial risks of the system, whose regulatory space for the incorporation of technologies and definition of coverage is still in the process of being designed, even in the nations with greater economic development in the region.

6. Policy Discussions

The lack of direct correlation between the health care outcomes and the spending structure entails the need to identify what is happening with the current mechanisms for resource allocation in health care, and what are the priorities that should guide the design of policies. The presence of social factors (education, environment, access to water and sanitation, etc.) intercedes between the health care spending made by the State and the families and the impact on the specific health care outcomes.

Nonetheless, there are endogenous constraints linked with the organization of the health system, in both planning and financing, insurance and provision of services that reduce the effectiveness of the applied resources. Flaws in the establishment of priorities and weakness in the criteria used in management show how different strategies of implementation of the existing physical, human and monetary resources make it possible to achieve heterogeneous results.

As discussed in the previous section, the existing social security institutions in health in the Latin American region are markedly diverse in terms of population, institutional objectives, allocation of infrastructure, and bargaining power within each country. In some cases, their functions are directly related to the management and provision of services based on a defined budget allocation and an insurance strategy established in other areas of public management. In others, the responsibility is associated with the design itself of the strategy to define guarantees of rights and priorities. Sometimes, social security institutions play a strictly regulatory role, without intervention in the areas of financing and management. This is the basis from which we propose three general areas for debate that inter-temporally affect social security institutions in general and that bring together the design of an integration strategy in the complex context of the regional health care systems.

6.1 Financial Protection, Risk Pool and Coordination

Sometimes, such inefficiencies are caused by the administrative or benefit scale on which the health care system operates, increasing average costs. The fragmen-

tation of health care systems in terms of their insurance structure is the greatest risk to be addressed by social insurance systems in the region.

In other cases, the existence of historical resource allocation structures tied to budget lines that presuppose homogenous functions of production and the lack of mechanisms for monitoring and evaluation undermine the effectiveness of the available funds and inputs.

Furthermore, since the health care system establishes a link between the institutional decisions of the ministry, social security institute, etc. and the community and individual decisions, for one thing, and between social or solidarity interests and the monetary goals, for another, it embodies the tensions between the target functions of each one of the stakeholders.

The use of health care services starts with the identification of a need that must be met by virtue of an encounter between the healthcare system and the patient in his/her context. Once the identified demand becomes an effective demand of the health care system, the institutional offering shows its capacity of providing access or not.

From this, it is necessary to establish objective criteria from a clinical and systemic perspective that can institutionally define the necessary quality standards to operate in both spaces of use (by default, ensuring access; by excess, ensuring effectiveness), and behaviors (regulating over-provision and promoting healthy habits).

This type of argument requires operating jointly in the institutional and individual areas, providing the health authorities with financial and regulatory instruments to be able to guarantee sufficient coverage and quality to meet the needs of the population. This requires not only providing sufficient infrastructure to ensure the physical supply, but also the capacity of generating an educational role that can impact on the habits of the population.

Promotion and prevention policies enable changes in behaviors that reduce individual health risks and thus bring about savings for the health care system, opening the possibility of using them for covering other needs.

6.2 Non-communicable Diseases and Healthy Behaviors

The epidemiological and demographic transition of the last few decades brought about an increase of the so-called non-communicable diseases (NCD), mainly of cardiovascular disease, diabetes, cancer, chronic respiratory disease and external causes of injury. In total, these NCD account for over 70% of deaths in our region. Added to this is the growing impact of kidney disease.

The sustained growth of these diseases throughout the world threatens the future capacity of response of health care systems. Our region is not immune to this reality,

which, combined with infectious diseases, faces our healthcare system with significant challenges arising from this "double burden" of disease.

Inadequate levels of coverage and accessibility to health care services suggest a need for policies aimed at increasing them, but it is also important to consider the role of health promotion policies, which represent cost-effective actions with the capacity of reducing the demand for services in the future.

In fact, there is evidence that the observed reduction in mortality for cardiovascular diseases in developed countries can be attributed specially to changes in habits and behaviors. In Great Britain, most of the decline in mortality from non-communicable diseases was due to the reduction of the consumption of tobacco and other risk factors at the population level. In our region, the laws of smoke-free environments have reduced hospitalizations for acute coronary syndromes. The aspects related to quality of life are increasingly considered as health care outcomes, especially in non-communicable diseases with prolonged life expectancy.

Besides being the most frequent causes of mortality, noncommunicable diseases significantly affect quality of life related to the health of the people who suffer from them, requiring significant financial resources, and also requiring *the care of family members or institutions* (Suhrcke, Nugent, Stuckler & Rocco, 2006). In addition, physical inactivity accounts for 3.2 million deaths annually (5.5% of the total) worldwide, heavily impacting on women and older adults.

This, in turn, increases the risk of ischemic heart disease, cerebrovascular disease, breast cancer, colorectal cancer and diabetes. The estimated global prevalence of a sedentary lifestyle is 17%, but if we consider insufficient physical activity or physical inactivity, this figure rises to 41%.

Cost-effective interventions to stimulate physical activity include changes in urbanization and transportation, community organization (hiking groups, etc.), changes in school curricula, and communication strategies at a local level (Norum, 2005).

6.3 Evaluation of Technologies

In line with what has been presented in this paper, Mulligan, Walker and Fox-Rushby argued in an article published in 2006 that the coming decades will show dramatic changes in the needs of the population. According to the authors, "while developing countries are still under pressure combating communicable diseases (HIV, malaria and tuberculosis in particular), an increase in mortality from NCDs is evident, including conditions such as depression, coronary diseases, and cancer".

The authors presented a point of interest in the discussion of this essay: although estimates of the present and future patterns of disease have stimulated the recognition of non-communicable diseases in the agenda, they do not provide guidelines about how to deal with them. If the decisions that are to be considered by officials and

policy-makers involve the use of limited resources, it is necessary to know which of the available interventions are the most efficient and equitable to apply.

The importance of including an economic perspective in the organization and management of health care systems has been recognized. However, the use of these capabilities in the definition of mechanisms for decision-making, priority setting, and measurement of the impact on coverage and equality of the health care systems is not yet widespread, even in relatively standard topics such as the implementation cost-effectiveness studies. According to Hutubessy, Chisholm, Tan-Torres Edejer and WHO-CHOICE (2003), there are often political causes, social preferences and systemic barriers that limit their implementation.

With this in mind, in 2000 the WHO emphasized the role of cost effectiveness analysis for identifying interventions that generate the best results for the available resources. Thus, defining what treatments and technologies are the most cost-effective is a priority, especially in developing nations.

However, Mulligan et al. point out that, while these types of studies provide insight on the technical efficiency of the identified interventions and the way to achieve a specific objective at the lowest cost, they usually do not provide guidance on how to allocate resources among various programs with non-homogeneous objectives. The greater the range of interventions to be compared, as in the previously mentioned case of epidemiological accumulation, the lower is the possibility of combining the results they produce.

Without progress in a scheme such as the one mentioned above, the responsiveness of the health care system is reduced, weakening the financial sustainability of the deployed social protection mechanisms. Furthermore, discretion in the incorporation of technologies, drugs and treatments without scientific support undermine the equality of the health care model, subsidizing non-priority and/or superfluous interventions with resources that should be invested in other interventions with better proven effectiveness.

7. Conclusions

The Millennium Development Goals (MDGS) were aimed at establishing guidelines for collective action to reduce the gaps of access to the global health care systems through the establishment of global guidelines for health indicators. While the progress made in many nations were highly satisfactory, there is still a long way to go, improving care models and facilitating mechanisms of monitoring and analysis of achievements.

These discussions include a set of elements that move forward in the development of models of universal health coverage, opening a series of interconnected topics. This agenda for discussion includes three groups of arguments regarding:

i) The change in the epidemiological profile of the global population.
ii) The development of new diagnostic and therapeutic technologies, and their incorporation into a system of guarantees of rights.
iii) The feasibility of a model of financial protection that is sustainable and equitable.

This discussion is particularly relevant in social security institutions in health care in today's Latin American region for several reasons.

- The resources used in the healthcare sector should generate a more homogeneous coverage in terms of effectiveness, but this would require analyzing the criteria of insurance, management and regulation of the system.
- The achievement of coverage brings along a demand for greater quality and the inclusion of more and newer services and technologies. This requires the establishment of standardized and systematic criteria to analyze and assess the progress achieved, in order to provide rationality and efficiency to health care spending.
- In third place, this occurs in a context that still shows significant gaps between social groups and sectors. Thus, the fragmentation among sub-systems and within each one of them set institutional barriers to equitable access.
- The decentralization of the public sub-system and the broad participation of the private sector in the provision of services require the rational use of the State's regulatory and financial tools to align interests, homogenize legislation, and build a more equitable and financially sustainable system.
- The existence of a fragmented insurance model naturally creates access gaps that the population faces at the benefits level and that are not necessarily related to the quantity or quality of the services provided, but rather with flaws in the mechanisms of insurance and management of resources upstream in the organizational health care model. As insurance structures multiply, the ability of the system to provide all its citizens equal access varies, offering various incentives both to users and to the funders and providers of the health systems.

The financing model needs to be discussed in the light of the new international trends in financial protection, drawing on the successes already achieved by the social security structure. This necessarily involves the design of a more comprehensive regulatory framework (including all subsystems) that includes the new needs of the population and the identification of quality gaps in terms of unmet needs and effective quality.

In this respect, we suggest the strengthening of technical institutions devoted to the regulation of technology, institutional certification, and the design of mechanisms for program and service costing to facilitate the rational adoption of new developments in science. Thus, regulatory framework, financial protection, and universal coverage strategy would be aligned to facilitate access to equivalent service interventions, regardless of their place of residence and their socio-economic status.

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