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Social Security and Prospects for Equity in Latin America

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EXECUTIVE SUMMARY

Introduction. This study summarizes, updates and integrates the most important recent economic-financial data on social security in Latin America and the Caribbean (LAC); in addition, it analyzes its evolution, current problems and trends, and finally proposes alternative policies and research agendas for the 1990s. The term social security includes: social insurance (old-age, disability and survivor pensions; care of common sickness and maternity; and pensions and care of occupational accidents and diseases), family allowances, social welfare, and national health systems or public health programs. Most Latin American (LA) countries follow the traditional model of social insurance while a few countries have adopted the broader and more modern social security model. The study focuses on pension and sickness-maternity programs which account for 90% of expenditures of social insurance/security.

I. Stages, Typologies and Trends. Based on the historical evolution and current degree of development of their social insurance/security systems, LA countries are divided into three clusters and ranked within each: (a) upper group of pioneer countries: Chile, Uruguay, Argentina, Cuba and Brazil; (b) intermediate group: Panama, Mexico, Peru, Colombia, Bolivia, Ecuador, Paraguay and Venezuela (Costa Rica used to belong to this group but, due to the rapid development of its system, moved up to the first); and (c) lower group of latecomer countries: Dominican Republic, Guatemala, El Salvador, Nicaragua, Honduras and Haiti. The higher a group/country is ranked, the older its system and the higher its: population coverage, percentage contribution on wages, share of expenditures over GDP, proportion of expenditures that go to pensions, and ratio of pensioners/contributors. Conversely, the lower the ranking: the younger the system; the lower the coverage, contribution, expenditures/GDP and pensioner/contribution ratio; and the higher the percentage of expenditures going to sickness-maternity. Upper-group systems usually endure deficits while lower-group systems enjoy surpluses, at least until the 1980s. If the current trends continue, countries in the intermediate and lower groups would eventually suffer the problems typical of the upper group. Countries in the non-Latin Caribbean (NLC) have some common characteristics with Costa Rica (young programs but universal coverage) and can be inserted in the upper group.

II. Financing. Social insurance is mostly financed by wage contributions paid by the insured, employers and, in some countries, the state (the latter may contribute with taxes or subsidies too). The percentages of social insurance/security revenue and expenditure over GDP in LAC are the highest among developing countries and are growing. This raises the question of whether significant resources could be subtracted from investment without harming development. The insured do not finance more than one-third of the costs, while the employer plus the state finances most of the rest (investment yield contributes a very small proportion). Employers' evasion and payment delays are grave problems: they range in some countries from 23% to 60%. In an increasing number of countries, the state is the principal debtor to the system, owing as much as $600 million. Due to escalating inflation, private employers' and state debts have shrunk in real terms. Out of eight

representative LAC countries only three generated real positive yields of investment in the 1980s, while the rest had negative yields as low as -21% annually, hence decapitalizing the reserves. In spite of the high percentage of payroll contribution, social insurance/security endures actuarial disequilibria in most LAC countries and financial or accounting imbalances in at least half of them, particularly since the 1980s. Upper-group countries--except for Chile's new system-- and some of the intermediate-group countries are the most affected by this phenomenon. Because contributions are already high in many countries, attempts to balance the system shall be addressed to reduce costs.

III. Population Coverage. Although statistics are usually deficient, at the end of the 1980s total population coverage on sickness-maternity was: 80% to 100% in Brazil and Costa Rica (Bahamas, Barbados, Cuba and Jamaica were probably in this group as well); 60% to 79% in Argentina, Uruguay and Chile; 40% to 59% in Mexico, Panama and Venezuela; 20% to 39% in Nicaragua and Bolivia; and 1% to 19% in Peru, Paraguay, Colombia, Guatemala, Honduras, El Salvador and the Dominican Republic. The overall coverage for the region was 61% but, when Brazil was excluded, coverage declined to less than 43% and, in half the countries, it was less than one-third. Not only is coverage low, but it is usually unequal among occupational groups, economic activities and geographical units. Coverage tends to be positively correlated with income, labor skills, the power of pressure groups, the degree of urbanization and the level of regional development. With very few exceptions, those below the poverty line are excluded from coverage. The traditional model of social insurance, predominant in LA, has not been able to universalize coverage as in the developed countries, because it was designed for a labor force made up mostly of wage-earning urban workers, while in most of LA the mass of the labor force is composed of agricultural workers, the self-employed and unpaid family workers. Those covered are in the formal sector while informal workers (the majority in some countries) are excluded. Expansion of coverage to agriculture and/or the informal sectors has been achieved by very few countries (e.g., Brazil, Costa Rica, NLC, Mexico) by using non-conventional approaches. The cost of universalizing coverage with the current traditional costly model would be intolerable, e.g., 39% of GDP in Ecuador, 25% in Nicaragua, 21% in El Salvador. The reform of that model is a necessary condition to expand population coverage.

IV. Benefits. LAC social insurance/security benefits are the most advanced among developing countries and, in some cases, ahead of industrialized nations. But such largess has had a negative impact on savings, and produced unsatisfied basic needs in a substantial part of the population. The older (upper-group) systems have granted exceptionally generous benefits as well as more liberal entitlement conditions than those existing in the intermediate and lower groups. Among the most generous pension benefits are: seniority pensions which allow retirement with 20 or 30 years of work regardless of age; fixing the pension equal to 100% of the last month of wage; and automatically adjusting the pension to the cost of living. The sickness-maternity leave can be equal to 100% of the salary, and there have been other generous benefits in that scheme such as contact lenses, orthodontics and payment of treatment abroad. But extreme inequalities in

benefits are common as well, e.g., the ratio of special pensions (civil servants, armed forces) to that in the general system could be as high as 8 to 1; and regional disparities of physicians and hospital beds per population are as large as 63 to 1 and 8 to 1 respectively. Finally, most benefit expenditure is concentrated on the productive-age and retired populations while the vulnerable materno-infant group is usually underprotected. The predominant benefit structure in LAC has contributed to escalating costs, impeded universalization of coverage, had a regressive impact on income distribution, provoked actuarial and financial disequilibria, and eventually led to the erosion of real pensions and deterioration in the quality of health care. Elimination of generous benefits and standardization of entitlement conditions are essential in any reform.

V. Administration. Administrative costs in half of the LAC countries ranged from 10% to 32% of total expenditures, which are the highest in the world (compare such percentages with 2% and 4% among developed countries). Causes of the high expenses are: excessive and relatively high renumerated personnel, multiplicity of administrative institutions, information and accounting deficiencies, legal complexity, and inefficiencies in health-care management. Elimination of redundant employment and privileged labor conditions, unification of multiple institutions, legislative simplification, and improvement in accounting and managerial efficiency are necessary to drastically cut administrative costs.

VI. The Effect of Social Security on Development. Social insurance/security has had a beneficial effect on improving labor safety and maintaining income, and should have contributed to increase life-expectancy and possibly reduce mortality rates. It is not possible to accurately assess the impact on savings and investment, however, the regional trend away from capitalization towards pay-as-you-go financing systems is a negative indicator. Concerning distribution, the most universal systems have less regressive effects than those with low population coverage. Welfare programs, health-care schemes (particularly public) and family allowances have a progressive impact. Among pension programs, non-contributory and rural-domestic schemes have a progressive effect but privileged schemes (e.g., for civil servants) are regressive. Countries with fairly unified and universal systems combined with welfare assistance are those with the most progressive effect. Equity concerns in a reform should give priority to the most progressive programs.

VII. The Impact of the Economic Crisis. The economic crisis of the 1980s has had negative effects on social insurance/security. Real revenues have declined because: real wages decreased, open unemployment increased, the informal sector expanded, evasion and payment delays rose (stimulated by high inflation), the state debt grew worse, and public health budgets were cut due to adjustment programs. Conversely, expenditures rose during the crisis because: prices of medicines and surgical equipment, employee salaries and benefits increased due to inflation, unemployment payments grew, and the number of people on welfare expanded. As a result, the financial deficit in the upper countries became worse and the surplus enjoyed by most countries in the intermediate group turned into deficit in several of

them, while the actuarial disequilibria worsened all over. Population coverage declined or stagnated or its rate of extension slowed down because of increases in unemployment, informality and evasion. Eventually the crisis forced some countries to let real pensions decline and there is evidence of a deterioration in health services as well.

VIII. The Need for Reform and Its Obstacles. The crisis has prompted reforms of the traditional model in all pioneer countries geared to improve solvency, eliminate the most salient privileges and standardize entitlement conditions. The most radical and opposite reforms have been privatization in Chile and statization in Cuba. More moderate reforms have been introduced in Brazil and Costa Rica. And minor reforms, unable to correct the financial problems, have been tried in Argentina and Uruguay. Among intermediate-group countries the emphasis has been on extending coverage (Panama, Mexico, Venezuela) but the crisis slowed down or paralyzed these advances and some of these countries began to suffer from financial disequilibria. The lower-group countries continue to face serious difficulties to expand population coverage; the most important attempt has been done in Guatemala; other efforts have failed (as in the Dominican Republic). Most of the NLC countries combined universal coverage and relatively solid finances at least until the mid-1980s when some of them (Barbados, Jamaica) began to confront imbalances. Obstacles faced in the reform, besides those of an economic nature, are: resistance of privileged groups and the social security bureaucracy, and lack of power or inertia or fear to lose votes among politicians. There is urgency to educate the population, government leaders and bureaucrats on the need of social security reform.

IX. The Expanding Gap on Skills and Training. The social insurance/security crisis has induced a substantial increase in the domestic and international demand for skilled personnel in planning, computation, financing, investment, health economics, etc. On the other hand the supply of these experts is minute, stagnant, and deficient in quality. Available training on social security is grossly inadequate. To improve the situation, the report recommends four training programs: an applied master degree, recycling of professionals, training seminars for current personnel (following the EDI model), and policy workshops for policy makers.

The study proposes detailed policies (according to the various groups) in each of its sections, and identifies the principal issues which demand further research.

INTRODUCTION

This study has two objectives: (1) to summarize the most recent information available on economic-financial aspects of social insurance or social security systems in Latin America and the Caribbean (LAC), including the evolution of such systems, their principal current problems, and their trends until the end of the 1980s; and (2) to propose policies and research agendas to confront and study major problems both current and those which will be evolving in the last decade of the 20th century.

The study is divided into nine themes: (1) historical evolution, characteristics of the systems, and regional trends; (2) financial problems: the burden of the system, the insured's contributions, employer's evasion and payment delays, state debt, investment inefficiency, and financial and actuarial disequilibria; (3) population coverage: differences among countries, inequalities, obstacles against and costs of universalization; (4) benefits: generosity, inequalities, and losses in real value; (5) administrative problems: high expenditures, excessive personnel, institutional multiplicity and complexity, information and accounting deficiencies, and health-management inefficiencies; (6) the effect of social insurance/security on: living conditions, savings-investment, income distribution and employment; (7) the impact of the 1980s economic crisis on social insurance/security: revenues, expenditures, equilibrium, population coverage and benefits; (8) the need of and obstacles against reform; and (9) the growing skill gap: supply and demand of experts, insufficiency of available training, and programs to close the gap.

The term social security is used herein following the traditional broad ILO concept; it covers several programs such as (a) social insurances (old age, disability and survivor pensions; employment injury care and monetary benefits; nonoccupational sickness and maternity care and monetary benefits; unemployment compensation); (b) family allowances; (c) social welfare or public assistance (such as pensions for low-income persons not eligible for social insurance benefits, food stamps, etc.); and (d) national health systems or public health programs. The term social insurance is, therefore, narrower than social security and embrace the programs listed in (a) above. There are other differences between the two concepts. Social security tends to offer universal coverage of population and social risks, in an integrated manner, through diverse sources of

financing including general taxes, direct state payments and wage contributions. Conversely, social insurances tend to offer a more restrictive coverage of risks and population than social security, their programs usually are not integrated, and typical financing is through wage contributions paid by the insured, employers and the state.

Most Latin American countries basically follow the traditional model of social insurances which have their antecedents on the trilogy of programs introduced by Chancellor Bismarck in Germany at the end of the 19th century. However, the pioneer countries have systems which either qualify as social security or are close to that goal. The non-Latin Caribbean countries, due to the influence of the British model, also have systems of social security (or are close to it).

In 1983, 90% of the LAC expenditures of social insurances and family allowances was concentrated on pension and health-maternity programs, while the remaining 10% was devoted to employment injury, unemployment compensation and family allowances (the last two programs exist in a small number of countries). Therefore, this study concentrates on pension and sickness-maternity programs, although the social insurance/security system is analyzed as a whole.

I. STAGES, TYPOLOGY AND TRENDS

This section provides the background and framework for the rest of the study. It first describes the historical evolution of social insurance/security in LAC, in three time stages/groups of countries, and pushed by key forces such as pressure groups and the state. Second, it summarizes the features of three groups of countries in LAC based on a series of variables: historical, economic-financial and demographic. Third, it identifies trends of development of social insurance/security in the region during the 19th century.

1. Historical Stages of Inception and Development

The LAC region was the pioneer within the Third World in the introduction of social insurance/security programs. A comparative study on the date of enactment of legislation establishing social-insurance pensions and sickness-maternity programs among 126 countries proves that the industrialized (and European developing) countries were the first to introduce such programs followed by Latin America and, later on, by Asian and African countries.

Table 1 compares the inception of pension programs: in 1930, 72% of the industrialized countries and 12% of LAC had a pension program, but none in the rest of the developing world; in 1950, 100% of industrialized countries and 38% of LAC had that program, compared with 8% in other less developed countries (LDCs); and, in 1985, all LAC countries had pension programs contrasting with 84% in other LDCs. Table 2 compares the inception of the sickness-maternity program: in 1930, 86% of industrialized countries and 3% of LAC; in 1950, 90% of industrialized, 47% of LAC, and from 5% to 16% of other LDCs; and, in 1985, 100% of industrialized, 88% of LAC, and from 24% to 52% of other LDCs.

In the process of inception and evolution of social insurance/security, three stages can be identified -- which correspond with the three groups of countries to be discussed later: pioneer, intermediate, and late-comer countries [66].

a. Pioneer Countries with Stratified Systems

In a small group of pioneer countries, which were the most developed ones (Chile, Uruguay, Argentina, Cuba, Brazil), the social insurance system emerged at an early stage (during the 1920s and 1930s), but it did so in a gradual and piecemeal fashion. This type of evolution gave rise to a multiplicity of managing

Table 1

Period of Introduction of Social Insurance Pension Programs by World Region: 1889-1985

Year of Introduction	Industrialized[a]			Latin Am. & Caribbean			Asia, Oceania, Middle E.			Africa		
	No	Cumulative	%	No	Cumulative	%	No	Cumulative	%	No	Cumulative	%
1889-1920	15	15	52	0	0	0	0	0	0	0	0	0
1921-1930	6	21	72	4	4	12	0	0	0	1	1	3
1931-1940	6	27	93	3	7	20	0	0	0	0	1	3
1941-1950	2	29	100	6	13	38	2	2	8	2	3	8
1951-1960	0	29	100	2	15	44	11	13	52	10	13	34
1961-1970	0	29	100	14	29	85	3	16	64	15	28	74
1971-1980	0	29	100	5	34	100	5	21	84	4	32	84
1981-1985	0	29	100	0	34	100	0	21	84	0	32	84
Without Program	0	29	100	0	34	100	4	21	84	6	32	84
Total	29	29	100	34	34	100	25	21	84	38	32	84

[a] Includes seven European countries not considered fully industrialized according to the World Bank classification.

Sources: Author's calculations based on 130.

Table 2

Time Period of Inception of Sickness-Maternity Programs of Social Insurance/Security, by World Regions: 1883-1985.

Year of Introduction	Industrialized[a]			LAC			Asia, Oceania, Middle E.			Africa		
	No	Cumulative	%	No	Cumulative	%	No	Cumulative	%	No	Cumulative	%
1883-1920	18	18	62	0	0	0	0	0	0	0	0	0
1921-1930	5	23	79	1	1	3	0	0	0	0	0	0
1931-1940	2	25	86	7	8	24	0	0	0	1	1	3
1941-1950	1	26	90	8	16	47	4	4	16	1	2	5
1951-1960	0	26	90	3	19	55	5	9	36	5	7	18
1961-1970	3	29	100	3	22	64	4	13	52	2	9	24
1971-1980	0	29	100	7	29	85	0	13	52	0	9	24
1981-1985	0	29	100	1	30	88	0	13	52	0	9	24
Without Program	0	29	100	4	30	88	12	13	52	29	9	24
Total	29	29	100	34	30	88	25	13	52	38	9	24

a Includes seven European countries not considered completely industrialized according to the World Bank classification.

Sources: Author's calculations based on 130.

institutions which protected different occupational groups through independent subsystems, with their own legislation, administration, financing and benefits. The state contributed to the financing of the subsystems through the creation of specific taxes or direct budgetary allocations. Gradually, subsystems were created which incorporated broader occupational groups or labor sectors as well as their dependents but, generally with more scanty benefits, more stringent entitlement conditions, and small or nil state financial support. The subsystems made their appearance approximately as follows: first, the armed forces, civil servants and teachers; then, blue- and white-collar workers in transport, energy, banking, communications and other public utilities (the so-called "labor aristocracy"); much later, the mass of urban workers (frequently separated into two large groups: white and blue-collar); and finally to agricultural and self-employed workers, small farmers and petty entrepreneurs, and domestic servants.

This type of evolution resulted in a stratified social insurance system, since it acquired a pyramidal structure, with relatively small groups of persons protected by privileged subsystems at the apex and center, and the majority of the population with subsystems providing less protection at the base. There were significant and usually unjustified differences between the subsystems, and the overall system lacked coordination. The stratified system had negative effects: legal confusion, administrative complexity, high operating costs, difficulty in establishing a single register and effective control of evasion, obstacles to combining length of service and contributions accredited in various institutions, and significant inequalities.

i. Role of Pressure Groups and the State

Considerable debate has been going on for about 15 years concerning the role of the two main driving forces of social insurance evolution in LAC: pressure groups and the state [52, 61]. The power base of the occupational groups described above lies either in their military strength, their administration of the government, the scarcity of their skills in the labor market, or their trade union organization. They bring pressure to bear on the state -- sometimes in conjunction with political parties -- in order to obtain social insurance concessions. Studies on various countries in the region show that, in general, the more powerful the pressure groups are, the greater the extent to which they enjoy earlier and more comprehensive coverage, more generous benefits and more state subsidies/transfers they receive. The state may not be a mere passive

receiver of pressures from groups. It may also exercise its own initiative by using social insurance as the instrument to co-opt, neutralize and control these groups in order to maintain social order. The evolution in which the role of the pressure groups has been preponderant is typical of the populist and democratic-pluralist political systems (such as those in Chile and Uruguay) during the first seven decades of the 20th century. The evolution in which the role of the state has been preponderant is more typical of political systems which, while also populist, have an authoritarian and corporatist inclination (such as those in Brazil under Getulio Vargas and Argentina under Juan Perón). In practice, the two forces (the pressure groups and the state) have worked hand-in-hand in both types of political systems, and it is sometimes difficult to determine which was the predominant one.

As economic development, urbanization, trade union and political mobilization processes advanced in the pioneer countries, the groups that lacked protection gained enough power to secure coverage within already existing or new subsystems. In some countries, they were even able to secure some benefits that had been reserved for the old systems, thereby achieving some extension of privileges to the masses (the so-called "massification of privilege"). The cost of the process of making coverage universal, combined with the generous benefits and the liberal entitlement conditions, became excessive and provoked actuarial and financial imbalances in many subsystems.

ii. The Process of Unification and Standardization

Social insurance reform, promoted by national and international technical studies, advocated the unification and uniformity of the subsystems and the elimination of costly privileges. But the groups were so powerful that the state was compelled to postpone the reforms, sometimes for decades. The political changes that occurred in these countries during the 1960s, 1970s and 1980s reinforced the state power vis-a-vis the pressure groups (which in many cases were disbanded or had their power significantly reduced) and facilitated the process of reforming social security.

In some countries (Cuba, Brazil), virtually the entire system was unified; in others (Argentina, Uruguay), a central integrating or coordinating agency was established which combined different organizations under a uniform system; and finally in one country (Chile), some measures were taken to make the old system uniform

and eliminate most privileges, but above all a new system was created, strongly influenced by private insurance and favoring individuality and multiplicity [8, 57, 58].

b. Intermediate Countries with Relatively Unified Systems

The second form of evolution of social insurance took place in countries whose main systems were established since the 1940s. They were influenced by the new trends inspired by the International Labor Organization (ILO) and the Beveridge Report, and sought to avoid the problems created in the pioneer countries. Some of these countries were relatively developed (Mexico), but most of them had a low level of industrialization and in almost all of them the rural sector predominated over the urban sector. These countries established a general managing agency responsible for eventually covering the entire population; however, at the start, the system was limited to the capital and the main cities.

In the more developed countries of this second group, before establishing the general managing agency, there had been a number of social insurance institutions which protected the most powerful pressure groups: the armed forces, civil servants, teachers, and energy and railroad workers (Colombia, Costa Rica, Mexico, Paraguay, Peru, Venezuela). Furthermore, in some countries (Mexico, Costa Rica), a number of exceptions were made after the general managing agency was created to establish separate subsystems for certain groups (almost always in the public sector). However, these groups were usually small and (except for the armed forces and civil servants) represented only a small percentage of the coverage under the general managing agency.

In any event, although there is a certain degree of stratification in some of these countries, it has never approached the level it reached in the first group. Because social insurance was introduced later in this second group, and also because of its relative unity and uniformity and its lower coverage of risk and population, these systems generally did not face the administrative and financial problems of the first group and, therefore, no radical changes were needed. Even so, the countries heading this group (those with the highest coverage, growing maturity of the pension program and high costs) are beginning to face the financial problems typical of the first group, aggravated by the economic crisis of the 1980s.

Costa Rica was part of this group (because its system was introduced in the 1940s and its pension program

has not matured completely), but it stepped out of the group as it reached almost universal population coverage and its costs became similar to those in pioneer countries.

c. Late-Comer Countries with High Unification

Lastly, we can identify a third group of countries, the so-called "late comers," that also have relatively unified social insurance systems -- but to a greater degree than those of the second group. Within this group there are two different subgroups. First, there are the least developed countries of the region: Central America (except for Costa Rica and Panama) and the Latin American Caribbean (except for Cuba). In this subgroup, social insurance did not generally appear until the 1950s and 1960s, and the general managing agency covers virtually all the persons insured (although the armed forces and sometimes civil servants have separate subsystems); population coverage is very low and sometimes limited to the capital city and the most heavily populated cities. These countries, at least until the crisis of the 1980s, did not face financial difficulties, and their main problem is to extend population coverage.

The other subgroup is comprised of the non-Latin countries in the Caribbean which achieved independence in the 1960s and 1970s. In the former British colonies, a national health system was usually introduced prior to independence, but social insurance programs were created after independence (between the mid-1960s and the 1970s). In spite of their newness, these programs reached universal coverage about the 1980s. As in the first subgroup, these programs are highly unified and relatively solvent financially [66, 73].

2. Typology of the Systems by Groups of Countries

a. Latin America

In 1983-84, the UN Economic Commission for Latin America and the Caribbean (ECLAC) sponsored a comparative study of social insurance/security among the 20 countries of Latin America. The study ranked all the countries and clustered them in three groups of social insurance development (upper, intermediate and lower) based on eleven variables with data from 1980 (see Table 3). These three groups correspond roughly with the stages of inception-evolution discussed in the previous section. The 14 non-Latin Caribbean countries were not included in that study because they have a different historical evolution and social security model, and due to lack of sufficient data on all of them. Notice that the ranking of countries is not a measure of

Table 3

Ranking and Grouping of Latin American Countries According to the Degree of Development of Social Insurance/Security: 1980

Group/ countries	Initial pensions law[a]	Population Covered[b]		Statutory contribution rate[c]	Social Security expenditure as a percentage of[d]			Surplus (or deficit) as % of	Ratio: pensioners/ contributors[f]	Population Aged 65 and over[f]	Life expectancy at birth (years)
		Total	Economically Active		GDP	National budget	Pensions				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Upper group											
Uruguay[g]	6	69	81	33	11	39	79	(60)	0.65	10.4	70
Argentina	6	79	69	46	10	38	55	(13)	0.32	8.2	69
Chile	6	67	62	29	11	32	53	17	0.46	5.5	68
Cuba[g]	6	100	93	10	9	13	44	(46)	0.21	7.3	73
Brazil	6	96	96	26	5	38	45	(7)	0.18	4.0	64
Costa Rica	4	78	68	27	9	36	21	0	0.06	3.6	71
Typical range[h]	6	67-100	62-96	26-46	9-11	32-39	44-79	0-(60)	0.18-0.65	4.0-10.4	68-73
Intermediate group											
Panama	4	50	46	21	7	23	34	(11)	0.12	4.4	70
Mexico	4	53	42	18	3	18	21	17	0.08	3.6	64
Peru	5	17	37	21	3	15	35	12	0.09	3.6	58
Colombia[i]	4	12	22	20	4	20	20	(8)	0.05	3.5	62
Bolivia	3	25	18	25	3	14	40	8	0.33	3.2	51
Ecuador	5	8	23	21	3	10	48	36	0.15	3.5	60
Paraguay	4	18	14	20	2	22	31	15	0.07	3.4	64
Venezuela	2	45	50	14	3	15	33	26	0.06	2.8	66
Typical range[h]	3-5	12-53	18-50	18-25	3-7	14-23	20-40	26-(11)	0.05-0.15	3.2-4.4	60-70
Lower group											
Dominican Republic	4	8	14	14	2	16	21	4	....	2.9	60
Guatemala[g]	2	14	33	20	2	14	14	3	0.06	2.9	58
El Salvador	3	6	12	12	2	12	18	23	0.08	3.4	62
Nicaragua	3	9	19	16	2	13	16	34	0.08	2.4	55
Honduras[j]	3	7	13	14	3	12	7	19	0.02	2.7	57
Haiti	2	1	2	12	1	....	10	15	....	3.5	51
Typical range[h]	2-3	1-9	2-19	12-16	1-2	12-16	7-18	3-34	0.02-0.08	2.4-3.4	51-60

a Number of decades prior to the 1980s when the first pension law was enacted.
b Percentage of the total population covered by the sickness programme and of the economically active population covered by the pensions programme.
c Total statutory percentage of payroll to be contributed by the insured person, the employer and the State.
d Social security expenditure includes total health expenditures.
e Deficit or surplus resulting from the subtraction of total social security expenditure from total income, expressed as a percentage of income.
f Dependency ratio: number of pensioners divided by the number on contributors.
g For Cuba and Uruguay, some figures are for 1981, the rest being for 1980.
h Calculated by extracting not more than one extreme or outlying variable.
i 1979.
j 1982.

Sources: 66, 68.

Table 4

Contributions to Social Insurance in LAC: 1987-1988
(in percentages of wages or income)

Countries	Insured		Employer	State[a]				Total Contribution[c]	Ranking[d]
	Salaried	Self-employed		%	Taxes	Covers Deficit	Others[b]		
Argentina	14	18	33[e]	7.8-10.6		x		54.8-57.6	1
Bahamas	1.7-3.4	6.8-8.8	7.1-5.4				x	8.8	23
Barbados	4.65-6.55	8	4.9-6.8		x		x	9.55-13.35	21
Bolivia	5		15	1				21	10
Brazil	8.5-10	19.2	18.2-20.7		x	x	x	26.7-30.7	4
Chile	20.57-28.53[f]	19.4-27.4	0.85			x	x	21.42-29.38[f]	6
Colombia	4.5-6.17	15-20	14.5-17.8				x	19-24	9
Costa Rica	9.0	12.25-19.5	23.66	0.75	x			33.41	3
Cuba	0	10	10			x	x	10	22
Dominican Rep.	2.5		9.5	2.5		x		14.5	15
Ecuador	8.35-16.35	15.5	7.35-16.85	0.3			x	15.85-30.5	11
El Salvador	3.23-5.5	8.75	7.57-8.25	0.5			x	10.8-13.75	18
Guatemala	4.5		10	3			x	17.5	13
Guyana	4.8	10.5	7.2					12.3	19
Haiti	2-6		4-12			x		6-18	20
Honduras	3.5		7	3.5				14	16
Jamaica	2.5[g]	5[g]	2.5[g]		x		x	5[g]	25
Mexico	3.75	13.57	13.44	0.75				17.94	12
Nicaragua	4		11	0.5			x	15.5	14
Panama	7.75-9.25	18-22	12.45-12.75	1.2		x		20.9-23.2	8
Paraguay	9.5		16.5	1.5				27.5	5
Peru	6	18	16					22	7
Trinidad-Tobago	2.8	5.6	5.6[e]				x	8.4	24
Uruguay	13-16		21-29		x	x		34-45	2
Venezuela	4		7-9	1.5			x	12.5-14.5	17

a State contribution as such, not as employer.

b Covers in different countries: the costs of welfare health-care and/or pensions, part of the cost of health services or pensions, the difference in the cost of the minimum guaranteed pension, administrative expenditures, and part of the cost of population-coverage extension.

c Excludes both the self-employed insured contribution and state payments which are not a percentage of wages. In several countries includes not only the main managing agency but other institutions as well.

d From higher to lower; an average has been calculated when there is a range of contributions.

e Excludes the premium for employment injury.

f The lower sum is in the new system and the higher sum in the old system.

g Variable percentage contribution according to wages; in addition there is a fixed contribution.

Sources: 39, 63, 71, 73, 77, 79, 81a, 83, 116, 130.

performance of the systems (i.e., it does not necessarily reflect their quality) but of the systems' level of development [66, 68].

i. Upper Group

The typical features of a system in the upper group in 1980 were:

-- the first pension programs were set up in the 1920s and 1930s;

-- social security covers more than 60% of the total population and of the economically active population (EAP) and it becomes practically universal when assistance for the very poor is included;

-- the total percentage contribution on wages (adding the percentages paid by the insured, the employer and the state) reaches or exceeds 26%, social security expenditures fluctuate between 9% and 11% of the gross domestic product (GDP) and average a third of the national budget;

-- from 44% and 79% of the expenditure is on pensions, due to the age of the scheme, the maturity of the pensions program and very high life expectancy;

-- the pensioner/contributor ratio is very high, rising to as much as 0.6, which means that one pensioner is financed by less than two contributors [this is due to the low population growth rate, population aging, the impossibility of incorporating new groups of insured (because coverage is already universal) and the maturity of the pension program]; and

-- the system faces a serious actuarial and financial disequilibrium with an in-built tendency to get worse in the future, requiring increasing state transfers and requiring urgent overall reform.

ii. Intermediate Group

The typical features of a system in the intermediate group in 1980 were:

-- the first pension programs were introduced in the 1930s or 1940s;

-- the system covers between 18% and 52% of the population;

-- the total percentage contribution on wages ranges from 18% and 25%, and social security expenditures range from 3% to 4% of GDP and between 14% and 23% of the national budget;

-- most of this expenditure goes to the sickness-maternity program (as the countries concerned are in a period of demographic transition and have a high dependency ratio) while only between 20% and 40% is spent

on pensions, owing to the relative immaturity of the pension scheme and to lower life expectancy;

-- the pensioner/contributor ratio varies between 0.5 and 0.15 for the above reasons, and because a high rate of population growth and the gradual incorporation of non-insured groups to the system; and

-- the system is generally in actuarial imbalance and faces the prospect of financial deficit in the short or medium term.

iii. Lower Group

The typical features of a system in the lower group in 1980 were:

-- the first pension programs were set up in the 1950s or 1960s;

-- the coverage of the population is less than 10% of the total population and 19% of the EAP, and the scheme is concentrated in the capital and the largest cities;

-- the total percentage contribution on wages is low, between 12% and 16%, and social security expenditures amount only from 2% of GDP and not more than 18% of the national budget;

-- some 80% of expenditures to the sickness-maternity program at less than 20% to pensions (because the pension program is new and life expectancy is very low);

-- the pensioner/contributor ratio is extremely low, between 0.02 and 0.08, for the foregoing reasons, and because there is a very high population growth rate (nevertheless, the ratio is increasing in some countries because of the freeze on population coverage);

-- the system, at least in the short and medium term, does not face financial imbalance, but it may suffer from actuarial disequilibrium.

A few of the Latin American countries do not fit perfectly into one single group but their variables are split into two groups with the majority in one. For instance, most of Costa Rica's variables come within the range of the upper group, except for four that are typical of the intermediate group: the newness of the pension law, the low percentage of expenditures that goes to pensions, the low ratio of pensioners to contributors (these last two are outcomes of the first), and the youthfulness of its population. The rapid acceleration in coverage of population and risks in the 1960s and 1970s catapulted Costa Rica from the intermediate to the upper group.

b. Non-Latin Caribbean

Although the non-Latin Caribbean countries were excluded from the comparison, a recent study on three of them (Bahamas, Barbados and Jamaica, which will be systematically discussed in this paper) indicates some similarities with the Costa Rican system: recent enactment of the pension law, universal population coverage, low ratio of pensioners to contributors, relatively young populations and high life expectancy. On the other hand, because these Caribbean systems are even newer and their benefits are usually less generous than those of Costa Rica's, the former are different: their percentages of contribution and costs are lower, and most of them enjoy a better financial situation [73].

3. Regional Trends

The previous description of the three groups and Table 3 allow us to describe trends of evolution in the 20 Latin American countries [66, 68]:

The higher the country is ranked in Table 3: (a) the older the pension program (variable 1); (b) the higher the percentages of the total population and the EAP covered (variables 2 and 3); (c) the higher the total percentage contribution on the payroll (variable 4); (d) the higher the social insurance/security expenditure as a percentage of GDP and government expenditure (variables 5 and 6); (e) the higher the proportion of social insurance/security expenditure devoted to pensions (variable 7); (f) the greater the financial imbalance and, therefore, the actuarial disequilibrium (variable 8); (g) the higher the ratio of pensioners to contributors (variable 9); (h) the higher the percentage of the population who are aged 65 and over (variable 10); and (i) the higher the life expectancy at birth (variable 11).

These trends were examined with an exercise of multiple correlation which produced positive correlation coefficients (statistically significant) among the variables, indicating that social insurance/security has developed in such a way that progress in one variable tends to be accompanied by progress in the others.

Other trends, which do not appear in Table 3 but that have been mentioned already and later on will be analyzed in the study, suggest that the higher the ranking of the country in the Table: (a) the higher the degree of stratification of its social insurance/security system although, after a certain point, there is a reversal and a trend towards unification/standardization; (b) the higher the number of risks covered and benefits offered,

as well as the more generous the entitlement conditions; (c) the more the use of financial methods of pure assessment and the lesser the use of capitalization methods; (d) the lower the generation of savings and investment of the system, partly due to the transformation of the surplus in rising deficit and the disappearance of the reserves; and (e) the higher the probability of a neutral or progressive impact on distribution, due to the process of universalization of coverage and the incorporation of welfare programs into the system.

An important question is whether, if the present trends of social security continue, the Latin American countries in the intermediate group and eventually in the lower group may face problems similar to those today afflicting the countries in the upper group. This means that as the system grows older and extends coverage of the population and benefits, its financial burden becomes heavier and its disequilibrium worse until its own existence is threatened. A satisfactory answer to this question would have required a detailed analysis of all the countries in the region. As this was impossible, the ECLAC study thoroughly analyzed six cases: four countries of the upper group (Uruguay, Chile, Cuba and Costa Rica) and two countries in the upper part of the intermediate group (Mexico and Peru). Subsequent studies supported by international organizations (e.g., World Bank, ILO, AID) have been conducted on various countries. Some of those studies have applied the ECLAC model to Colombia, Ecuador and Panama, all of them in the intermediate group [63, 70, 71, 83]. In addition, there have been recent updating of the cases of Chile, Costa Rica and Peru, to take into account the impact of the economic crisis of the 1980s [74, 75, 77, 78]. There are studies of new countries (Argentina, Bolivia, Brazil, Dominican Republic, Uruguay) which do not follow the ECLAC approach but analyze crucial aspects of their systems [33-34, 36, 39-40, 46-47, 56-58, 69, 105, 116-117, 119, 126]. Finally, there is the already mentioned study of three non-Latin Caribbean countries (Bahamas, Barbados, Jamaica) which belong to a subgroup of the lower group [73]. Although these 16 country studies do not follow a common methodology, they contribute solid evidence to positively answer the crucial question set above.

4. Recommendations on Research

To decisively test the trends of social insurance/security in the region, it is recommended to elaborate a new comparative study, with a common methodology, embracing 25 countries: (a) the six original countries in the ECLAC study; (b) the ten countries that have been studied later on; (c) five Latin American countries not

studied yet (Guatemala, Honduras, Nicaragua, Paraguay and Venezuela); and (d) two additional countries from the non-Latin Caribbean (Guyana and Trinidad-Tobago). This study should thoroughly analyze the effects of the economic crisis of the 1980s, which seems to have accelerated the observed trends and provoked premature crisis of social insurance/security in countries of the intermediate and low groups (see section VII).

The previous project is not exclusively academic as it has practical objectives. If the observed trends are confirmed (as well as the premature crisis of countries in the intermediate and low groups) it would be urgent to implement reforms to cope with the open or latent crises. Until the decade of the 1980s, most countries in those two groups appeared to have secure financial stability for a relatively long period of time, but the economic crisis may have changed that situation. Even some countries of the non-Latin Caribbean which enjoyed significant financial surpluses now confront disequilibria in the short run.

This study stresses the need to reform the current model of social insurance/security in the region as a whole and recommends specific policies to cope with the crisis.

II. FINANCING

The financing of social insurance in LAC relies mainly on contributions based on the salaries or wages of insured persons. The law (in some countries the managing institution) determines the percentages upon wages payable by the insured person and by the employer and, sometimes, by the government (on a tripartite basis, in addition to its contribution as an employer). The state also contributes through special taxes or by covering all or part of the deficit in the system, or by granting other subsidies. In the few countries where the self-employed are covered, they have to pay a percentage contribution (on an estimated income) equivalent to the combined percentage paid by employees and their employers. Table 4 shows the percentage contribution on the payroll in 25 countries towards the end of the 1980s. In a large number of countries, pensioners contribute with a percentage of their pensions. Another source of financing is the investment revenue of the reserve funds, mainly of pensions [66, 79, 81].

1. The Burden of Social Security

In general, the older a social insurance/security system is, the higher the total percentage contribution on the payroll is (see Table 4). Thus, in the pioneer countries (upper group) such a percentage ranges form 25% to 57%. (The only exception is Cuba where only the employer, which is to say the state, pays 10% but the state directly subsidizes half of the cost of the system). These percentages are similar to those of Europe and Japan. In countries of the intermediate group, the total percentage ranges from 18% to 28%, herein Paraguay has the highest percentage (28%), at a similar level than the upper group. These percentages are higher than those of Canada and the United States; Paraguay's is close to that of the United Kingdom. In the Latin American countries of the lower group, the total percentage fluctuates from 12% to 18% (similar to those of the United States and Canada), but in the non-Latin Caribbean the percentage is from 5% to 12% only (the lowest in LAC).

A comparison of the percentage contributions of Latin American countries, in 1980 and 1987-1988, shows that such percentage has increased in ten countries, stagnated in six and declined in four. The latter include Chile which, after the 1981 social security reform, gradually eliminated the employers' contribution (but the state subsidy to the old system has steadily risen) and Bolivia which, due to a substantial cut in the employers' contribution, is edging to financial disequilibrium [116].

The percentages of social insurance/security revenue and expenditure over GDP in LAC are the highest in the Third World and they are growing. Table 5 shows the percentage of social security expenditures over GDP in 30 LAC countries, basically relying on the ILO series. A comparison between 1965 and 1983 (respectively the earliest and most recent year available in the ILO series) indicates that the percentage of expenditures/ GDP increased in 17 countries and declined in 12. Nevertheless, in five countries, the percentage reached its highest point between 1975 and 1982 and declined thereafter. Other available estimates are higher than those in the ILO series. Furthermore, changes in the methodology of such series (e.g., in national accounts before and after 1975, and in the exclusion of certain health services after 1978) may be responsible for the observed decline in said percentages. Recent information for five countries (between 1984 and 1986) shows increments of the percentages in four and a decline in only one: Colombia 7% in 1984; Costa

Table 5

Expenditures of Social Security System as a Percentage of GDP in LAC: 1965-1983

Countries	1965	1975	1980	1983
Antigua & Barbuda	n.a.	n.a.	0.9	1.0
Argentina	n.a.	6.8	9.3	7.3
Bahamas	n.a.	n.a.	0.5	1.1
Barbados	n.a.	4.9	2.2	3.7
Belize	n.a.	n.a.	1.1[c]	1.6
Bolivia	3.6[a]	3.1	2.9	2.1
Brazil	4.3	5.7	4.8	5.6
Chile	12.1	11.0	10.7	14.3
Colombia	1.1	3.1	2.8	2.2
Costa Rica	2.3	5.1	7.1	6.3
Cuba	8.3	9.7	11.7	11.5
Dominica	n.a.	n.a.	0.8	1.0
Dominican Rep.	2.7	2.4	0.7	n.a.
Ecuador	3.2	3.0	2.9	3.7
El Salvador	2.2	3.3	1.7	1.8
Grenada	n.a.	n.a.	1.7	2.0
Guatemala	2.0	2.0	1.2	1.0
Guyana	4.3	1.9	1.3	1.8
Honduras	1.0	n.a.	0.8	0.9
Jamaica	2.7	3.2	1.4	1.7
Mexico	2.6	3.1	2.7	2.8
Nicaragua	2.1	2.8	2.3	1.1
Panama	6.0	7.5	5.9	7.7
Paraguay	n.a.	n.a.	1.2	n.a.
Peru	2.5	3.1	2.2	2.1
St. Lucia	n.a.	n.a.	0.5	0.6
Suriname	n.a.	1.7[b]	2.1	4.6
Trinidad & Tobago	2.8	2.4	0.7	2.4
Uruguay	9.6	10.7	7.6	10.8
Venezuela	3.1	3.9	1.3	1.5

a 1961 b 1978 c 1981

Sources: 1965-1983 from 93, except Cuba and Peru which are 1965 and 1975 (taken from 66).

Rica 9% in 1985; Chile 13.1% in 1986; Ecuador 4.3% in 1984; and Uruguay 11.2% in 1986 [28, 33, 63, 66, 73, 75, 77, 83]. In summary, the percentage expenditure/GDP has risen in most countries, especially in the long run [50], although this point deserves further investigation.

The Latin American pioneer countries (upper group) which have the oldest programs, broader population coverage and most liberal benefits had the highest percentages of social insurance/security expenditures over GDP in 1983 (Table 5): Chile (14.3%), Cuba (11.5%), Uruguay (10.8%) and Argentina (7.3%). The first three had percentages similar to those of the industrialized countries such as Japan (12%), Australia (12.4%), United States and the Soviet Union (13.8%), but lower to those of Western European countries [93]. Percentages of revenue/GDP in the pioneer countries are equally high (see last column of Table 6): Chile (16.7%), Cuba (11.5%), Uruguay (8.8%), Argentina (7.5%). Conversely, Latin American late-comers (lower group) which have the newest programs, smallest population coverage and, usually, least liberal benefits, show the lowest percentages expenditures/GDP (between 1% and 2%). ILO data place the non-Latin Caribbean at the same level of the Latin American "late comers" (except for Barbados and Surinam) due to the newness of their programs and meager benefits available in most of them.

Oscillation in the percentage expenditure/GDP in pioneer countries are usually the result of cost-of-living adjustments of pensions (which take the bulk of their expenditures) [50] or to transition programs which have allowed a large number of insured to retire under generous conditions; the latter occurred in Uruguay, in 1980-1981, provoking a record 15.4% of expenditures/GDP in 1982 [33]. In 1980-1983 there were declines in the percentages of Latin American countries of the lower group and in some of the intermediate group; these were due to cuts in the sickness-maternity program which absorbs most of their expenditures.

The high percentages of contributions/GDP and expenditures/GDP in several LAC countries raise the question of whether developing countries can afford to subtract so many resources from investment and what are the costs of that burden in terms of economic growth. In spite of the importance of these questions, no serious investigations have so far attempted to answer them. A first approximation to the subject indicates that some countries (Argentina, Chile, Costa Rica, and Uruguay) support a social security burden -- relative to their economic capacity -- much higher than the burden of other countries (e.g., Mexico and Venezuela)

Table 6

Percentage Distribution of Revenue of Social Insurance plus Family Allowances, by Source and Percentage Revenue/GDP in LAC: 1983

Countries	Insured	Employer	State & Taxes	Investment	Others	Revenue as % of GDP
Antigua & Barbuda	29.3	48.8	0.0	19.2	2.8	3.3
Argentina	34.5	27.2	36.0	2.0	0.3	7.5
Bahamas	23.2	38.0	5.2	33.6	0.1	2.8
Barbados	36.2	37.5	0.0	22.3	4.1	6.2
Belize	11.6	69.1	0.0	14.3	5.0	2.1
Bolivia	25.5	34.8	24.2	12.4	3.1	2.7
Brazil	15.6	74.0	8.2	0.0	2.2	5.4
Chile	31.1	2.1	48.9	15.9	2.0	16.7
Colombia	26.6	62.8	0.0	10.2	0.4	1.8
Costa Rica	28.4	47.0	18.6	5.3	0.8	9.2
Cuba	0.0	44.3	55.7	0.0	0.0	11.5
Dominica	27.3	45.6	0.0	26.2	0.8	3.4
Ecuador	38.6	38.1	1.3	22.1	0.0	3.6
El Salvador	23.7	55.8	0.0	20.0	0.6	1.8
Grenada	48.2	48.3	0.0	3.3	0.2	1.6
Guatemala	29.5	51.0	3.6	13.2	2.7	1.4
Guyana	20.6	30.9	0.0	48.5	0.1	8.5
Honduras	25.9	47.9	7.2	16.8	2.2	1.3
Jamaica	24.3	29.7	7.4	38.5	0.1	2.4
Mexico	19.7	62.0	12.3	5.2	0.8	2.0
Nicaragua	22.8	59.9	3.2	12.9	1.2	2.1
Panama	28.8	44.6	3.3	13.3	10.0	9.9
Peru	29.4	59.0	0.0	10.3	1.3	2.0
St. Lucia	43.5	43.5	0.0	13.0	0.0	1.8
Suriname	23.9	9.7	66.4	0.0	0.0	1.4
Trinidad & Tobago	18.1	36.2	27.2	18.5	0.0	2.5
Uruguay	23.5	23.3	49.2	1.6	2.3	8.8
Venezuela	28.6	39.3	13.7	18.3	0.1	1.8
Region X	26.5	43.1	14.0	14.9	1.5	4.5

a Family allowances only in Argentina, Brazil, Chile, Colombia, Suriname and Uruguay.

Source: 93

[66]. Still left unanswered is the fundamental question of which is the financially adequate or economically tolerable burden for each country.

2. Insured's Contributions: How Much of the Benefits they Pay

According to Table 4, in 1987-1988, in 16 out of 25 LAC countries, the percentage contribution imposed to the insured was less than a third of the total percentage of contributions; in eight other countries, the insured's percentage varied between a third and a half of the total; only in Chile was the insured's percentage greater than half the total percentage. In 14 of the countries, the insured's contribution was subject to a maximum or ceiling on wages. By law, the principal source of financing for social insurance/security is the employer's contribution, which represents two-thirds or more of the total percentage in 16 countries and from one-half to one-third in seven others (but in Chile only a fifth). In seven out of the twelve countries where the state contributes with a percentage over the payroll, such a percentage fluctuates from 2% to 5% of the total percentage contribution; and in other five countries the state percentage ranges from 7% to 17%. However these percentages do not take into account other state contributions which often are substantial.

The most recent (1983) statistics available for 28 LAC countries on the distribution by source of revenue from social insurance plus family allowance (Table 6) show that: (a) the insured contribute less than one-fourth of total revenue in 11 countries, from one-fourth to one-third in 12 countries, and from one-third to one-half in five countries; (b) the employer plus the state contribute three-fifths of total revenue in 11 countries, and from two-fifths to three-fifths in 14 countries; and (c) the investment yield contribution to total revenue is less than one-fifth in 20 countries and one-twentieth in 8 countries.

In summary, Tables 4 and 6 prove that the insured do not finance more than one-third of the costs of their benefits and this situation is inequitable in those countries that have a very low population coverage. For instance, in Honduras the population coverage in 1983 was 10%, the insured contributed 26% of total revenue, while the employer and the state together contributed 55%, which suggests a regressive effect on income distribution: 90% of the population is not insured (including the lowest income group) and may be financing -- through prices and taxes -- the bulk of benefits of those insured. Although to confirm this point, one would need to determine the incidence of social insurance contributions (see VI.3), the above analysis

questions the assumption of a "right" to the benefits generated by the insured persons' payments and the argued need for close correspondence between the "premium" (contribution) and the benefit. Furthermore, in several countries, all revenues of social insurance/security are insufficient to finance the expenditures of the system thus requiring state subsidies. The above-referred assumption has justified the discrimination in treatment between the users of social insurance and public assistance, and have increased the barrier standing in the way of the extension of coverage in those countries which have a small employed salaried labor force (see III.3). If one questions that assumption, one opens the way to replacing financing based on salary-related contributions by financing through another type of tax (e.g., on income or on value added) which could make universal coverage easier, and correct possible negative economic effects of the current type of financing upon employment and/or distribution (see VI.3).

In only a few countries are there transfers from the state budget (or from urban employers) to cover marginalized groups not eligible for social insurance benefits. For instance, in Mexico, the state contributes directly (and indirectly the insured and employers) to the operation of the primary health-care program for marginal rural groups. In Brazil, the program of social assistance for health-care which covers the rural sector is financed by taxes on both the payroll of urban enterprises and the value of agricultural production. In Costa Rica, the state contributes to the health-care and pension assistance programs for the very poor in rural and urban areas (see III.3).

3. Employers' Evasion and Payment Delays

The employer should retain the insured's wage contribution and punctually pay it, in addition to its own, to the social insurance institution. But evasion (avoidance of registration in the system) and payment delays (of those registered: mora) are grave problems in LAC. In the mid-1980s, gross estimates of these phenomena were: Argentina 23% of evasion; Bahamas 19% of combined evasion and mora (among self-employed it increased to 52%); Barbados 44% of mora (among self-employed a combined 96% for both); Brazil 60% of both; Chile 30% of mora; Jamaica 44% of mora (among self-employed 95% of both); Peru 33% evasion; and Uruguay 27% of evasion; in this country the system received 48% less than expected due to combined evasion and mora (see Table 6A). Debt for these causes are quite significant, for instance in 1985, in Colombia (with

Table 6A

Indicators of Evasion, Payment Delays, and Debt to Social Insurance, in Selected Countries of LAC: Second Half of the 1980s

Countries	Evasion and Mora			Monthly Rates (%)		State Debt (Million US Dollars)
	Private Employers (%)	Debt Million US $	Self-Employed (%)	Inflation	Interest charged for mora	
Argentina	23[a]					
Bahamas	19[c]		52[c]			
Barbados	44[b]		96[c]			
Bolivia	0			680	12	
Brazil	60[c]					
Chile	30[b]					
Colombia		135				170
Costa Rica						73
Dominican Rep.						95
Ecuador		35[b]		80[d]	28[d]	603
Jamaica	44[b]		95[c]			
Peru	33[a]	46[a]		150	16	194
Uruguay	27[a]					

a Evasion
b Mora
c Combined evasion and mora
d Annual

Sources: 26, 32, 51, 57, 60, 63, 66, 69-71, 73, 75, 77-78, 81a, 83, 105, 116.

an official estimate of 8% to 12% of mora) the debt of private enterprises to social insurance was US $135 million. Galloping inflation has eroded the real value of such debt, e.g., in 1985 the debt in Peru was US $46 million but at the end of 1988 -- in spite of its dramatic nominal growth -- it had dropped to US $7 million [32, 57, 60, 73, 77-78, 83, 105].

There are multiple causes of evasion and mora. The system of registration of employers and insured, as well as processing of payments, are highly deficient in many countries: there is no up-to-date information on employers' addresses, number of employees and their salaries; very few countries have a unified ID system for employers and insured; payments are often processed manually and there are neither individual accounts nor a current list of delinquent employers. In an effort to correct such deficiencies, a good number of countries have introduced computerization but, in spite of some progress, still many inefficiencies remain and computers have induced new problems.

The number of small enterprises, difficult to detect and control, is high. A 1988 study of social insurance conducted in Lima, Peru, showed that 33% of enterprises had more than six workers, employed 90% of the insured and paid 96% of total contributions; but the remaining 66% of enterprises, with less than six workers, employed 10% of the insured and paid 4% of total contributions. The cost of detecting, collecting and controlling these small enterprises (mostly evaders) is enormous and their number is growing due to the rapid expansion of the informal sector in that country. In Colombia, 97% of the enterprises has less than 50 workers and employs 50% of the insured. The excessive paperwork required for registration, payment and monthly reports to social insurance erect an insurmountable barrier for the small enterprises [73, 78, 83].

There is a scarcity of skilled inspectors and the low salaries paid to them create incentives for fraudulent deals with the debtors. (Due to the poor services or benefits often given by social insurance, workers conspire with employers to evade registration.) Denunciation of corruption in Colombia, rather than inducing the prosecution of delinquents and the creation of proper incentives, led to the elimination of the Inspection Department. Where inspectors are diligent, and evasion and mora are properly detected, the legal and judicial system for efficient collection and enforcement may fail. The prosecution and imprisonment record in LAC is appalling, for instance, in Bahamas there has not been a single case of prison for debt or fraud since social

insurance was introduced and, in Barbados, there has been one case in 20 years. In Colombia, the central administration of social insurance cannot press charges, the legal department is supposed to do so but it lacks incentive because departmental deficits are covered with a central fund. In many countries the judicial system is overburdened and delays in prosecution are considerable. Last but not least, when an employer is finally prosecuted, if the debt is so high that it can provoke the enterprise into bankruptcy, trade unions and the state often exert pressure to condone or postpone such debt in order to avoid unemployment [50, 70, 83].

Very high inflation rates (particularly in the 1980s) combined with low interest and fines charged for the debt are incentives for the employers to delay payment; they can make juicy profits by depositing the contributions in commercial banks and earning a higher interest. In the late 1980s, the interest (deflated) charged on the debt was negative in many countries, for instance: Bolivia -668% in 1985, Peru -134% in 1988, Ecuador -52% in 1988 (see Table 6A). In the latter, the Director of social insurance declared in 1984 to a World Bank mission that the interest rate charged for debts was quite profitable for his institution and that, in addition, there was a 4% interest rate charged for payment delays in discharging installments of agreements for mora! [26, 51, 63, 78, 116].

Measures to cope with these problems are: (a) the computerization of the registration, payments, individual accounts, and up-to-date lists of delinquent employers (Bahamas, Barbados, Jamaica and Peru are taking this step); (b) the introduction of a single ID for social insurance, tapes, electoral voting, etc. (this is being done in Uruguay); (c) the simplification of paper work in order to lighten the burden of small enterprises; (d) the strengthening of the inspection and legal departments and payment of adequate salaries to their officers (or bonuses for successful prosecution and collection); (e) the imprisonment of debtors combined with profuse publicity as public warnings; and (f) the fixing of interest rates and fines higher than both the inflation rate and commercial bank interest. Finally there should be a search for alternative methods of financing that could reduce the risk of evasion/mora.

4. The State Debt

In an increasing number of LAC countries, the state is the principal debtor to social insurance/security because: it has not paid its contribution as an employer (and in some countries its obligation as third party

contributor), and/or it has retained tax payments collected for social insurance/security, and/or has not fulfilled its obligation to reimburse social insurance for health services provided to the dispossessed or to civil servants or militarymen. In the mid 1980s the state cumulative debt was: US $73 million in Costa Rica, US $95 million in the Dominican Republic, US $170 million in Colombia (only to the civil servants fund), US $194 million in Peru, and US $602 million in Ecuador (see Table 6A). The state debt to social insurance in Panama was reported to be "enormous" but there are no specific figures available [66, 69-71, 75, 83].

In some countries, the state has signed agreements to pay the debt with the social insurance institution. However, both the debt and the interest rate have not been indexed to inflation, hence payment is done with devalued currency and the real interest rate is often negative. As a result, the real debt has shrunk dramatically, for instance, in Peru it was cut by 99.8% in 1981-1988, and in Ecuador it declined by 75% in 1973-1985 [78, 81a]. The economic crisis of the 1980s has aggravated the situation because of multiple urgent demands on the state (e.g., to pay the foreign debt) plus escalating inflation. In fact, the increasing state debt has been a major factor in a liquidity crisis of social insurance in several countries.

One way to ameliorate the shrinkage of the state real debt has been for the state to sign agreements with foreign countries for the provision of hospital equipment or medical supplies to social insurance. In this way, the real value of the debt is protected while the state becomes directly responsible to foreign governments or suppliers [78]. In other countries, the social insurance institution has accepted a reduction in future state obligations in exchange for a firm agreement to adequately pay the debt. But, in most countries, the state has been reluctant to re-negotiate both terms and interest rates of old payment agreements in order to adjust them to inflation [75]. In Chile, Mexico and various non-Latin Caribbean countries the state has, so far, honored its obligations with social insurance/security.

5. Investment Inefficiency

As we saw in Table 6, in 1983, the percentage of social insurance revenue generated by the investment yield in LAC 28 countries averaged 15%, but was lower than 5% in eight countries and exceeded 20% in seven countries. The LAC average was relatively higher than the average of developing countries of Africa and Asia [93]. Reasons that explain the difference among world regions and among countries are: (i) the degree of

maturity of the pension program (which generates most of the reserves); (ii) the tendency of the oldest programs to substitute capitalization (total or partial) by pure assessment methods which lead to a reduction in the size of the reserve and its yield; and (iii) the efficiency of the investment.

In late-comer/lower-group countries (60% of the total number of LAC countries), pension programs were introduced from the 1950s to the 1970s; those programs use partial capitalization methods (mostly scaled premium), generate a high percentage of investment return over total revenue, and such a percentage exhibits an increasing trend. Intermediate-group countries (21% of LAC countries) introduced their pension programs in the 1940s; they also use partial capitalization methods but have a smaller percentage of investment return/total revenue than the late-comers, and such a percentage exhibits a declining trend in most countries. Finally, pioneer/upper-group countries (18% of LAC countries) introduced their pension programs in the 1920s and 1930s; they use assessment methods (pay-as-you-go), lack substantial reserve funds and therefore, the revenue generating capacity of their investment is very small or nil. Chile's new pension program is an exception because it was established in 1981, uses total capitalization (general level premium) and its percentage of investment return/total revenue is similar to that of the late-comer countries and exhibits an increasing trend [93].

In general, investment management of social insurance pension funds in LAC has not been efficient. In almost all of the region, social security agencies are not designed to play the role of financial intermediaries as their personnel has no experience in investments, no investment plan has been developed or, if it has been developed, it has not been coordinated with the national plan. Additionally, capital markets are poorly developed and inflation has devalued reserves (particularly in the 1980s).

In Latin America, pension fund reserves normally have been invested in: (a) bonds and other state securities, often non-negotiable and rarely indexed to inflation which, in practice, have been forced loans to cover state budget deficits, thus flooding social insurance/security agencies with bonds without value; (b) personal or mortgage loans, generally for insured who, aided by inflation (and the lack of indexation in loans and interest), have obtained capital practically free and have thus decapitalized the fund; (c) loans to the sickness-maternity program for hospital construction or to cover its deficits, which are laudatory from a social

point of view, but not financially profitable; (d) construction of administrative buildings or housing for the insured, which generate very low or no revenues at all, due to the freezing of rents, inefficiency of collection and payments in depreciated money; and (e) in some countries, investment in commerce (e.g. stores with state subsidized prices for the benefit of the insured) and services (e.g. cinemas, theaters, sport facilities) that also have yielded very low or negative returns. Investment in bank fixed-term deposits is probably the most profitable in LAC, but it is not very important, while investment in shares is unusual [66].

In the non-Latin Caribbean, the bulk of the reserves has been invested in state bonds and securities with high yields (in some of these countries) than in Latin America. Another important part of the investment is in fixed-term deposits which also generate high yields. A problem confronted by some of these countries, however, is that the Ministry of Finance (instead of the social insurance institute) controls investment and, at least in one case, has retained part of the investment returns [73].

Table 7 presents the results of a comparative study, completed in 1989, on portfolio investment of social insurance funds in eight LAC countries. Invested assets (as percentages of money supply, gross fixed capital formation, central government revenue and GDP) are quite significant in Chile, Barbados and Bahamas; of moderate importance in Costa Rica, Jamaica and Ecuador; of scarce or nil significance in Peru and Mexico. Real (deflated) growth of invested assets in 1981-1987 was: Chile 424%, Bahamas 62%, Costa Rica 45%, Barbados 38%, Jamaica -3% and Mexico -73%. Only three countries had annual average real positive yields of investment in 1980-1987: Chile 13.8%, Bahamas 2.7% and Barbados 0.7%; the other countries had negative yields: Jamaica -4.8%, Ecuador -10%, Costa Rica -10.5%, Mexico -20.8% and Peru between -20.6% and -29.4%.

The three countries with positive real yields are also those which have the relatively most important invested assets and highest growth rates of those assets. Conversely, the two countries with the worst negative yields are those which have the least significant invested assets and have suffered a real decline in the value of such assets. The positive relationship among the three variables is a logical one as investment returns are influenced by the relative size of the fund and its real growth rate [81].

Various factors explain the different performance of investment as measured by the three explained

Table 7

Comparison of Significance, Composition, Real Growth and Real Yields of Social Insurance Invested Assets in Case Studies: 1980-1987

Countries		Invested Assets (1987)[a] as % of : Money Supply	Gross Fixed Capital Form.	Govt. Revenue	GDP	Composition (% distribution, 1987)[a] Govt. Bonds	Loans/ Mortg.	Fixed-Term D.	Shares	Real Estate	Others	Average Inflation Rate (1980-87)	Real Growth Invested Assets (1981-87[b])	Average Real Yield (1980-87)[b]
Bahamas		123.2	66.8	68.0	11.3	66.3	15.9	17.8	0.0	0.0	0.0	6.6	62	2.6
Barbados		79.3	79.3	52.9	12.7	16.0	46.9	35.1	2.0	0.0	0.0	7.2	38	0.7
Chile			96.4	54.0	15.4	45.0	22.9	26.1	6.0	0.0	0.0	24.3	424	13.8
Costa Rica		39.1	29.4	37.5	5.9	43.7	14.7	35.3	0.0	5.6	0.7	29.1	45	-10.5
Ecuador		20.4	15.3	20.9	2.8	10.2	83.1	0.0	3.3	3.2	0.2	25.7	-23	-10.0
Jamaica		40.5	26.7	20.9	5.8	91.0	8.8	0.2	0.0	0.0	0.0	16.6	-3	-4.8
Mexico[d]	I	0.59	0.21	0.29	0.04							69.5	-73	-20.8[f]
	II	3.1	1.1	1.5	0.2	13.6	2.6	0.0	0.0	83.8	0.0			
Peru		6.7	3.5	8.1	0.7	3.6	6.8	71.8	0.0	17.8	0.0	93.4	-18	-20.6 -29.4[e]

a Bahamas 1985; Ecuador 1986.
b Bahamas 1980-1985; Barbados 1980-1986; Chile and Peru 1981-1987; Ecuador 1980-1986; Mexico 1981-1983.
c Bahamas 1981-85; Chile 1982-87; Ecuador 1981-86.
d I: excludes "muebles e inmuebles", II: includes "muebles e inmuebles".
e Based on two different estimates, a third gives -40% for 1982-85.
f Average for 1981-1983.

Source: 81

variables. The higher the inflation rate is (see Table 7), the lower the real yield and vice versa; high steady inflation rates play a key role in turning positive real yields into negative yields and in eroding the real value of the reserve, because the vast majority of investment has a fixed interest.

The composition of the portfolio is also important: a high concentration in instruments with poor performance (e.g., in Jamaica 91% in public bonds, in Mexico 84% in real estate, in Ecuador 83% in mortgage and personal loans, in Costa Rica 44% in public bonds) determines an overall negative yield. On the other hand, 66% of Bahamas invested assets are concentrated on public bonds but these have had an interest rate higher than the commercial bank rate thus largely explaining that country's positive yield. Fixed-term deposits usually pay a high real positive interest which has helped the performance of Bahamas, Chile and Costa Rica (in this country to partly offset the negative performance of public bonds). Peru has 72% of its investment concentrated in fixed-term deposits (mostly in US dollars) but, since 1985, the government forcibly converted dollar deposits into intis and the subsequent dramatic devaluation of the inti provoked a substantial loss in the fund.

Investment in short-term instruments is from 73% to 77% of the total in Mexico and Barbados, and have a lower interest than in long-term instruments. The proportion of the fund in either fixed or net-current assets is very high in Mexico and Ecuador hence reducing the sum invested and contributing to poor returns. Finally, the oldest pension funds, such as Ecuador and Peru, are more mature and thus have less resources to invest while the opposite is true in the newest programs such as those of Chile, Bahamas and Barbados [81].

To improve investment performance it is necessary to: (a) eliminate or reduce government interference; (b) reduce funds in fixed and net-current assets to a minimum; (c) diversify the portfolio; (d) invest in long-term instruments with the highest yields; and (e) index interest rates to inflation [81].

6. Inequality in Financing Health Programs in Social Insurance and the Public Sector

In most of LAC, the only health services available for the bulk of the population are provided by the Ministry of Health (MH) rather than social insurance, but the MH receives a considerably smaller percentage of national health-care funds than social insurance. In spite of the importance of this issue, poor data are available: for 1980 and only for six countries (see Table 8). In Colombia, Ecuador, Peru and the Dominican

Table 8

Comparison of Percentage Distributions of Health-Care Coverage and Revenues, Between the Ministry of Health and Social Insurance, in Selected Countries of Latin America: 1980

Countries	Ministry			Insurance		
	Coverage	Revenues	Ratio	Coverage	Revenues	Ratio
Colombia	82	38	0.46	18	62	3.44
Costa Rica	15	22	1.47	85	78	0.92
Dominican Rep.	91	53	0.58	9	47	5.22
Ecuador	89	59	0.66	11	41	3.72
Panama	45	34	0.76	55	65	1.18
Peru	76	50	0.66	24	50	2.08

a Excludes private sector

Source: 80

Republic the ratios revenue/coverage of the MS fluctuated from 0.46 to 0.66 while the ratios of social insurance were 3.44 to 5.22. The most equal allocations were registered in Costa Rica (1.47 and 0.92 respectively) and Panama (0.76 and 1.18 respectively).

Due to this inequality, the MH does not count with the minimum resources needed to provide health care to the majority of the population, and there is a growing gap in the physical plant and quality of health care between both sectors. Furthermore, the unequal allocation of resources produces a negative distortion because the MH usually concentrates on primary health care (e.g. prevention, nutrition, sanitation, health education, infant-maternal care) while social insurance health care is typically curative and geared to the productive age bracket of the population (which has a lower sickness incidence than infants and pregnant women) and the retired population (which has a high sickness incidence and demands complex and expensive care). In Ecuador and Peru (until 1986) the social insurance sickness-maternity program neither covers the insured's spouses (except for delivery) nor children older than six months or one year. In the least developed LAC countries, infant mortality rates are very high and the main causes of death are digestive and respiratory diseases often affecting infants of low-income families. These diseases (and infant mortality) can be sharply reduced with a shift of health resources from social insurance to the MH (and from productive and retired groups to the maternal infant population), but the separation of budgets between the two sectors makes this goal difficult to fulfill [5, 18, 54, 56, 63, 70, 78, 80, 96, 126]. In the late 1970s and the 1980s, some countries (e.g., Chile, Costa Rica) have accomplished significant reductions in infant mortality by allocating more resources to maternal-infant care [17, 30, 72]. Most non-Latin Caribbean countries have avoided the inequality in the allocation of health resources typical of Latin America, because they usually have one system, public, of health care [73]. The positive experience of this group of countries should be adequately studied with the goal of a potential replication in other countries of the region.

7. Actuarial and Financial Disequilibria

In spite of the high percentage of contribution on the payroll and a greater allocation of health-care resources to social insurance, the latter endure actuarial disequilibria in most LAC countries, as well as financial or accounting imbalances in at least half of them, particularly since the 1980s [7, 66, 73, 78, 125].

Table 9 estimates, for 1970-1983, the financial annual surplus or deficit of social security as a percentage of GDP in 21 LAC countries. The estimate excludes the state contribution as such (it includes the state contribution as employer) because it implies a subsidy or transfer [50]. In 1970 and 1975, approximately half of the countries suffered a deficit; the situation improved in 1981-1982 when less than one-third of the countries had a deficit; but, in 1983, there was a deterioration as 43% of the countries endured a deficit.

a. Upper-Group Countries

The pioneer countries had the highest accounting deficit in 1983: Cuba -6.4%, Chile -5.7%, Uruguay -4.3%, Argentina -2.3% and Brazil -0.4% (-1.8% in 1989). The deficit persisted through the 1970-1983 period as expenditures increased at a faster rate than revenue, due to the following reasons. On the expenditure side: (a) the universal extension of coverage; (b) an excessively liberal legislation on benefits; (c) a capital-intensive system of curative medicine; (d) pension schemes which have matured; (e) an increasing number of pensioners who are living longer than was expected both in the original legislation and in old actuarial estimates, thus receiving their pensions and health benefits for longer periods; and (f) adjustments to pensions and other benefits in line with the cost of living. Revenue in the pioneer countries is becoming proportionately lower because of the following: (a) coverage cannot be extended any further (and if it were, it would be to bring in lower income groups, which would worsen the disequilibrium); (b) the number of active contributors is dropping progressively in comparison with the growing number of beneficiaries; (c) there is a high level of employer's evasion and payment delays, particularly in countries which have high and sustained inflation; (d) the state fails to comply with its financial obligations, thus leading to the accumulation of very large debts; (e) the contribution burden of social security is very heavy and it is very difficult, politically and economically, to increase either wage contributions or taxes; and (f) with the exception of Chile, the pioneer countries lack substantial reserves and, hence, do not generate investment revenue.

The Cuban deficit occurs because the insured do not pay at all and the enterprise contribution approximately finances half of the total cost, hence the state has to cover the difference [66]. In Chile, the state subsidizes the enormous deficit of the old pension program which has 97% of the total number of pensioners but only 14% of the active insured who contribute. In addition the state supports the new pension

Table 9

Surplus or Deficit of Social Security System as Percentage of GDP in LAC: 1970-1983

	1970	1975	1978	1979	1980	1981	1982	1983
Argentina	n.a.	0.7	0.3	-0.0	-0.4	-3.0	-2.2	-2.3
Bahamas	n.a.	n.a.	n.a.	n.a.	1.6	2.1	1.3	1.4
Barbados	-0.2[b]	-2.4	0.4	0.5	0.5	0.3	2.0	2.5
Bolivia	0.2[c]	0.3	0.0	0.2	-0.0	0.7	0.6	0.1
Brazil	n.a.	n.a.	n.a.	n.a.	n.a.	-0.3	-0.0	-0.4
Chile	-4.1[b]	-1.0	-1.7	-2.0	-2.0	-2.3	-7.7	-5.7
Colombia	0.2	-0.0	-0.2	-0.1	-0.0	-0.2	-0.6	-0.2
Costa Rica	0.7	1.6	1.4	1.2	1.0	0.8	0.8	2.5
Cuba	n.a.	n.a.	n.a.	n.a.	n.a.	-6.2	-6.4	-6.4
Ecuador	n.a.	0.6[d]	1.8	2.1	1.7	1.3	1.5	1.3
El Salvador	-0.0	-0.3	0.6	0.6	0.4	0.6	0.8	0.8
Guatemala	0.1	-0.0	0.4	0.5	0.4	0.4	0.3	0.3
Honduras	-1.2	n.a.	n.a.	n.a.	n.a.	0.3	0.1	0.2
Jamaica	-0.7	-1.7	0.3	0.3	0.3	0.7	1.0	0.6
Mexico	-0.4	-0.3[d]	n.a.	n.a.	0.4	0.4	0.5	0.1
Nicaragua	0.1	-0.0	0.0	0.5	0.9	0.7	0.6	0.8
Panama	0.1[c]	1.2	1.0	1.7	1.9	2.7	3.1	2.4
Peru	n.a.	n.a.	n.a.	n.a.	n.a.	0.4	0.0	-0.1
Trinidad & Tobago	0.8	0.4	0.3	n.a.	0.2	0.0	0.0	-0.5
Uruguay	n.a.	-1.2	-0.5	-0.3	-0.8	-3.7	-5.8	-4.3
Venezuela	-0.7	0.3	0.4	0.2	0.3	0.2	0.2	0.0

a Excludes contribution of state as such (not as employer)
b 1971 c 1972 d 1974

Sources: 50 and author's calculations based on 93.

program by accepting the amount of time served in and contributions paid to the old system. Finally, the state has taken full responsibility for the payment of welfare pensions, unemployment compensation and family allowances. As a combined result of these three obligations, the state subsidy to social security increased from 4.6% to 8.9% of GDP in 1980-1986 (in the last year, 68% of total expenditure was subsidized by the state). The deficit in pensions alone (combining the old and new programs) rose from 2.2% to 6.6% of GDP in the same period and, in 1986, 75% of total pension expenditures was subsidized by the state [77].

In Uruguay, the deficit of the general system (DGSS, now Banco de Prevision Social) reached 95% of revenue and 45% of expenditures in 1982 (the worst year of the 1980s); in this year the state subsidy to the system was equivalent to 61% of the central government total expenditures. The deficit declined in 1983-1986, in the last year the state transfer to the system was 3% of GDP; the state subsidy covered 30% of pension expenditures and 32% of health-care expenditures [32]. In Argentina, the pension program was in the red throughout the 1980s and required raising state subsidies [34, 36, 76, 117]. In Brazil, the overall system was deficitary in seven years of the 1976-1984 period. There was a surplus in 1985-1986, but the deficit reappeared in 1987 and was estimated to be 1.8% of GDP in 1989 [56, 58, 105]. Practically there are no actuarial studies in any of the above four countries.

Costa Rica enjoys the best financial situation within the upper group. The general institute (CCSS) generated a surplus in 1975-1985 except for one year, but the sickness-maternity program was deficitary in the entire period and subsidized by the pension program which suffered a deficit in 1981. After an increase in contributions, both programs generated surpluses in the second half of the 1980s. The latest actuarial balance available for this study (1985) forecast an equilibrium of the pension program until 1994 but a later projection anticipated the end of the equilibrium period to 1990 or 1991. Independent pension programs for the public sector received in 1986 a state subsidy which ranged from 70% to 90% of their total expenditures [75].

b. Intermediate-Group Countries

Four countries of this group enjoyed a surplus in 1983; Panama had the highest surplus (2.4%) and the rest ranged from 0.1% to 1.3%. Two countries endured minor deficits: Colombia -0.1% and Peru -0.2% (See Table 9). But more recent, disaggregated data depict a gloomier picture: (i) practically in all countries, the

sickness-maternity program has suffered a steady deficit which has been financed by transfers from the pension program; (ii) in all countries there are special programs in the public sector which are deficitary and subsidized by either the state or the general institute; and (iii) at least two of these countries have suffered a liquidity crisis and the rest either face an actuarial deficit or have not conducted an actuarial balance for a long period.

According to Table 9, the country with the longest deficit record is Colombia. The general institute in the private sector (ISS) had an annual surplus in 1975-1985 (except in 1983) but the sickness-maternity program had a three-year deficit that was covered with transfers from the pension program. Practically all institutes in the public sector, both at the national and departmental level, are deficitary and the state subsidizes from 69% to 88% of their costs. From 1980 until at least 1986, the ISS did not have an actuarial balance and the public institutes have never had one [83]. In Ecuador, the sickness-maternity program of the general institute (IESS) suffered a steady deficit in 1980-1988, and the pension program (which partly covered those deficits until 1985) for the first time incurred a deficit in 1986-1987. Surpluses from other programs balanced off the IESS finances in 1980-1988. The latest two actuarial analyses, done in 1982 and 1987, were flawed or useless. The IESS has projected a global deficit of the system for 1989-1990 or 1993, depending on whether the state pays its obligations or not [81a].

In Mexico, the general institute (IMSS) had a surplus from its inception until 1983 when there was a deficit. The sickness-maternity program has been deficitary since its creation in 1943, except for three years, during which the pension program has steadily generated a surplus (partly used to cover the deficits in sickness-maternity). The actuarial balance of 1982 forecast that the contribution set for the pension program would be sufficient until 1985 to maintain its financial balance; in 1987 the combined reserves of all IMSS programs were only 13% higher than the cost of pensions for that year [66, 81]. In Peru, the unified institute (IPSS) was deficitary in 1982-1984, had a surplus in 1985 and confronted an increasing deficit in 1987-1988. The major culprit for that imbalance has been the sickness-maternity program, in the red since 1977 and steadily subsidized by the pension program. An actuarial evaluation done at the end of 1988 concluded that IPSS reserves would last for only two years and recommended to sharply increase the percentage contribution, something difficult to do in the midst of the worst economic crisis in modern Peruvian history [78, 81].

In Bolivia, the social insurance system (SBSS) had an overall surplus in 1980-1986, except for one year, but the sickness-maternity program was deficitary in all years except for one. In 1987 the contribution was reduced by 4.4 percentage points and experts predict a deficit in the short-term; there has not been an actuarial analysis in many years [116]. In Panama, the actuarial deficit of the general institute (CSS) increased eleven-fold in 1975-1985 and, in the last year, reached 9% of GDP; the CSS sickness-maternity program has had an accounting deficit since 1975. The actuarial deficit of the supplementary fund of the public sector reached 3.8% of GDP in 1985; 89% of the accounting deficit of this sector is financed by the state. In order to reestablish equilibrium, the CSS total contribution should double (from 21% to 42%) while that of the public sector should double or triple, according to the financial method used (from 20% to 42% or 60%) [43, 71, 126].

c. Lower-Group Countries

In 1983, according to Table 9, all of the eight countries reported (except Trinidad-Tobago) generated a surplus which ranged from 0.2% to 2.5%. The largest surpluses were in two non-Latin Caribbean countries: Barbados 2.5% and Bahamas 1.4%. There is no detailed information on the financial-actuarial equilibria of the Latin American countries in this group but on Bahamas, Barbados and Jamaica. These countries appear to be in better shape than their counterparts in Latin America, partly because they do not have a sickness-maternity program and their pension programs were recently introduced. The equilibrium periods of the latter are expected to last until 1994 or 2002, but these projections come from actuarial balances which rely on relatively optimistic assumptions.

The social insurance systems of these three countries generated surpluses in 1978-1986 but, as a percentage of the system revenue, such a surplus gradually declined. The Bahamas system appears to be the strongest financially; its latest actuarial balance (1985) projected an equilibrium period of the pension program until 2002 but it was based on some optimistic premises. In Barbados, the welfare pension program is normally deficitary and requires transfers from the general reserve. The actuarial balance of 1985 projected an equilibrium of the social insurance pension program until 1995 but based on a reduction in the cost of the welfare program. In Jamaica, there has not been a thorough actuarial review since 1977, due to inadequacy

of data. A "preliminary report" prepared in 1985 approved a raise in benefits (which was eventually implemented) to be compensated with increases in both contributions and investment yields; as none of the latter two had materialized by 1987, it was predicted that the reserves would be depleted by 1994 [73].

8. Changes in the Financial Method

The goal of all methods of financing social insurance programs is to balance their revenues and expenditures but in different time periods ranging from one year to infinity, larger reserves being required as the equilibrium period lengthens. There are three main methods of financing: full capitalization, partial capitalization and pay-as-you-go [6, 125].

The full capitalization method or general fixed-premium with full reserves (fully funded) attempts to maintain the equilibrium for an indefinite time by means of a fixed contribution or premium. The latter is actuarially calculated to finance estimated future pension obligations based on demographic, economic and other factors. One advantage of this method is that the premium is fixed, hence the contributors know beforehand what the burden is going to be, and there is no transfer of that burden to future generations. However to guarantee the stability of the premium and the equilibrium of the program, this method requires that: (a) benefits are not increased or entitlement conditions liberalized without a corresponding adjustment in revenues; (b) premia and all other obligations are totally and punctually paid; (c) reserves are invested efficiently generating a positive real yield and (d) actuarial studies are conducted periodically to make any needed adjustments.

The most common partial capitalization method is the scaled premium with incomplete reserves. This method maintains the equilibrium for a given period (for example one decade) establishing a fixed premium within that period but normally increasing the premium (scaling it up) in subsequent periods. This method has the advantage of needing smaller reserves and hence reduces the pressure to invest large reserves efficiently. On the other hand, the premium normally requires periodic increases (based on frequent actuarial reviews) that must be implemented in a timely fashion, and there is a transfer of part of the burden to future generations.

In pay-as-you-go or pure assessment method, the equilibrium is usually calculated on an annual basis and

often there is a reserve only for contingencies and fluctuations. The reserves required are small and hence investment is nil or of little significance. But this method requires more frequent increases in contributions and involves a higher transfer of the burden to future generations than partial capitalization.

Short-term risk social insurance programs (e.g., sickness-maternity, family allowances and unemployment) generally use pay-as-you-go, while long-term risk programs (e.g., old-age, disability, survivors and employment-injury pensions) may employ any of the three methods explained.

In LAC long-term programs have gradually shifted their financing method from full to partial capitalization and, in the pioneer countries, to pay-as-you-go. Table 10 identifies the financing method used in pension programs of selected LAC countries towards the end of the 1980s.

Initially, many countries in Latin America adopted full capitalization but violated its essential requisites: (a) the legislative branch added new benefits and liberalized entitlement conditions without adjusting the premium upward; (b) employer's evasion and payment delays, the state debt and negative investment yields reduced revenue below projections; (c) unexpected increases in life expectancy resulted in longer retirement periods and modified the actuarial estimates, but ages of retirement were not raised accordingly (in Costa Rica and Panama the age for early retirement was reduced while life expectancy increased dramatically); and (d) inflation forced an increase in the real value of pensions beyond projections.

As a result of the violations explained above, practically all Latin American countries shifted, legally or de facto, from full to partial capitalization (mostly to the scaled premium). By the end of the 1980s probably the only example of a fully-funded pension fund was Chile's new pension program established in 1981. Furthermore, many Caribbean countries, probably taking into account the Latin American experience, started their new pension programs, in the 1960s or 1970s, using partial capitalization too. But legal rigidity (several countries fix contributions by law) and opposition from unions and business have been strong obstacles to scaling up the premium. In practice, various countries have fixed only the initial premium and failed to do actuarial reviews, determine the duration of the time periods and adjust the premium.

The pioneer countries in Latin America subsequently shifted from partial capitalization to pay-as-you-go: Argentina, Brazil, Chile (in the old system), Cuba (which since 1963 followed the centrally planned approach)

Table 10

Financing Methods of Social Insurance Pension Funds
in Selected LAC Countries: Late 1980s

Countries	Full Capital-ization	Scaled Premium	Assessment of Constituent Capitals	Pay-as-you-go
Argentina				X
Bahamas		X		
Barbados		X		
Brazil				X
Chile (Old)				X
New	X			
Colombia (ISS)		X		
Civil Servants				X
Costa Rica (CCSS)		X[a]		
Civil Servants				X
Cuba				X
Ecuador		X[a]		
Guatemala		X		
Jamaica		X		
Mexico (IMSS)		X[a]		
Panama			X	
Peru		X		
Uruguay				X

a Full capitalization in theory or by law, but scaled premium in practice.

Sources: 81

and Uruguay. In addition, civil servants and military pension funds in several countries use pay-as-you-go also. Reasons for the new shift were the continuation or worsening of the already explained transgressions, combined with some demographic changes. For instance, the rate of population growth declined more than anticipated in actuarial calculations (due to birth control and substantial emigration in some countries) and accelerated the population aging; in turn, the universalization of coverage reduced the entrance of new insured, therefore, the pensioner/contributor ratio rapidly increased.

The shift to pay-as-you-go in the pioneering countries was only a temporary postponement of the time of reckoning. As has been said, this method has an annual base and hence requires frequent increases in contributions, a task even more difficult to achieve than under the longer periods on which the fixed and scaled-premium methods are based. Even worse, if the pension programs were incapable of attaining equilibrium when the pensioners/contributors ratio was lower, it is even less feasible when that ratio has increased significantly. The country facing the worst situation in Uruguay whose pensioner/contributor ratio in 1980 was 0.65 to one but, in 1986 it was estimated to be either 0.78 or 0.86 to one [28, 32, 50, 110]. In Brazil the 1980 ratio was 0.18 to one and it was projected to be either 0.43 or 0.56 to one for the year 2000 [56]. In Argentina the ratio was 0.32 to one in 1980 but was projected as 0.42 to one for 1990 [60]. In comparison, the industrialized countries have lower ratios, e.g., 0.18 in Japan, 0.31 in the United States, 0.37 in France [56].

No longer able to replace one financing method by another to postpone the crisis, the pioneer countries finally had to confront it. In almost all of these countries the state temporarily came to the rescue of pension programs through subsidies which gradually increased in 1975-1983. And yet the economic crisis of the 1980s and the heavier burden of the system has eventually forced the state to stop or reduce such subsidies or let pensions erode.

Chile tackled the problem in 1981 with the creation of a fully-funded private pension program, but the old system continues with pay-as-you-go and suffers an enormous and increasing deficit. Argentina is now studying a reform (more moderate than the Chilean); one alternative being considered is the introduction of a fully-funded supplementary pension program. Uruguay is studying this type of program too. In Cuba, the state

subsidy jumped from 24% to 56% of expenditures in 1974-1983 in spite of some erosion in real pensions but there is no talk of reform yet.

As the financing method has successively changed from full to partial capitalization and pay-as-you-go, the reserves have declined or vanished. Furthermore, countries that still enjoy substantial surpluses (because their pension programs still are in the capitalization period and have neither universalized coverage nor reached maturity) may eventually face the pioneers' fate unless they change their policies. On the other hand, the reintroduction of a fully-funded pension program in part of the Chilean system and the consideration of supplementary pensions (also fully-funded) in Argentina, Costa Rica and Uruguay may set a new trend in LAC. The system of complementary pensions is common in Western Europe and North America but mostly through private collective bargaining rather than law [57].

Despite their importance these changes have not been studied in depth and in a comparative, integrated manner. And yet these opposite trends (crises and expanding pay-as-you-go systems on the one hand, and new capitalization programs on the other hand) are expected to continue in the 1990s and possible into the new century.

9. Recommendation on Policy and Research

In order to increase revenue, reduce the actuarial and financial disequilibria, and promote a better balance in the allocation of resources between social insurance and the ministry of health, the following measures are recommended: (i) raise the contributions (especially among the insured) in those countries that do not have a very high percentage of wage contribution; (ii) computerize registration, payments, individual accounts and up-to-date list of debtors; (iii) introduce a single ID for all contributors (both insured and employers) and their dependents, not only for social security but for taxes, elections, etc; (iv) simplify the process of registration and payment of contributions particularly for small enterprises; (v) strengthen the inspection and execution of collection, fix interest plus fines at a higher rate than both inflation and commercial bank rates, and prosecute and imprison debtors; (vi) renegotiate the state debt with the aims of indexing it or through other ways to avoid its devaluation, and fix future state obligations at a more realistic level; (vii) improve investment efficiency eliminating/reducing government intervention as well as funds in fixed or net-current

assets, diversifying the portfolio, investing in long-term instruments with the highest yields and indexing interest to inflation; (viii) re-allocate health funds in a more balanced way between social insurance and the ministry of health taking into account the population covered by each; and (ix) conduct actuarial balances periodically, determine the length of equilibrium periods and properly increase contributions in scaled premium methods, and avoid the introduction of new benefits (or improvement of those in existence) without provision of needed additional revenues.

Concerning research, the following topics should receive priority: (i) refine historical series on revenue/expenditure of social insurance/security as percentages of GDP in order to more precisely determine trends; (ii) evaluate which is the social insurance/security burden financially adequate or economically tolerable in each country; (iii) estimate evasion and mora more accurately as well as debt devaluation as a result of inflation; (iv) expand the existent study of investment efficiency to include a representative sample of Latin American countries from the lower group; (v) study alternative sources of financing, other than the wage contribution (e.g., VAT, income tax, etc.) and their comparative advantages and disadvantages; and (vi) elaborate a comprehensive comparative analysis of financial methods and their effects in LAC.

III. POPULATION COVERAGE

Coverage of risks by social insurance/security in LAC has evolved gradually. The first risk to be covered was that of employment injury (occupational accidents and diseases) based on the theory of employer liability. The second risk was that of non-occupational sickness and maternity. But like the previous category this was related to employment; thus maternity care was provided only for salaried female employees and workers (the coverage was later extended to maternity of wives or common-law wives of workers, and sickness coverage to some of their dependents). In the non-Latin Caribbean, however, social insurance does not administer a sickness-maternity program, but this is provided under a national health system or public health program. In Latin America, old-age and disability pensions were established about the same time as sickness-maternity insurance, while survivor pensions were added later. In the non-Latin Caribbean, pension and other cash benefit programs were introduced much later. By the mid-1980s, all LAC countries (with the exception of

sickness-maternity in Haiti) had these three programs in operation, though they covered the whole population only in a minority of countries.

The last programs to come into being were family allowances and unemployment benefits, which exist only in a few countries: family allowances in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica (this is not a true family allowance program), and Uruguay; and unemployment compensation in Argentina, Barbados, Brazil, Chile, Ecuador (actually a pension) and Uruguay. In general, the extension of the risk coverage has been much faster than that of population coverage, because priority has been given to vertical extension (risks covered) rather than horizontal extension (population protected): quite often a minority of the population is covered against all risks, but the majority is not protected against any risk at all [66].

1. Low Population Coverage

When referring to coverage of the population, one has to distinguish between the legal and the statistical coverage. The former is what is prescribed by law, but not always in effect; the latter comes from estimates of the population protected, which are closer in reality but not always trustworthy.

a. Legal Coverage

In Latin America, generally, the social insurance sickness-maternity program is the one that has the broadest legal coverage (see Table 11) in half the countries, it covers the entire salaried employed labor force and, in the other half, it covers only part of the employees, usually those in the public sector and in industry, mining, commerce and financial services. However, in Cuba and Nicaragua all residents are covered by the legislation, while in Chile and Costa Rica the whole population is covered (combining welfare and social insurance programs) except for those with high incomes who are not working. On the other hand, in the remaining Central American countries and in Haiti, the statutory coverage is normally limited to the capital and larger cities. In 13 countries the law protects the self-employed (compulsory in four and voluntarily in nine), in 12 countries domestic servants are covered (compulsory in nine), and practically all countries cover the dependents of insured persons (normally the wife or common-law wife and children, except in Haiti and Ecuador) and pensioners.

In practically all the non-Latin Caribbean (plus Cuba and Nicaragua) all residents have the legal right to

Table 11

Legal Coverage of Health-Care Benefits by National Health System and/or Social Insurance in LAC: 1987-1988[a]

Countries	Initial Law	All Residents	Salaried Employees		Self-Employed	Domestic Servants
			All[b]	Part[c]		
Social Insurance						
Argentina	1943[M], 1944[S]		X		X[e]	X
Bolivia	1949			X	X	
Brazil	1923[S], 1931[S]			X	X[e]	X
Chile	1924		X		X[e]	X
Colombia	1938[M], 1946[S]			X	X[e]	X[e]
Costa Rica	1941		X		X[e]	X
Dominican Republic	1947			X	X	
Ecuador	1935			X		X
El Salvador	1949			X	X	
Guatemala	1946[S], 1953[M]			X[d]		
Haiti	1967					
Honduras	1952			X[d]	X[e]	
Mexico	1943			X	X[e]	X[e]
Panama	1941		X		X[e]	X
Paraguay	1943		X		X[e]	X
Peru	1936		X			X
Uruguay	1958[M],1960s[S]		X		X	X[f]
Venezuela	1940		X[d]			X
National Health System						
Antigua-Barbuda	1973	X	X		X	
Bahamas	1972	X	X		X	X
Barbados	1966	X	X		X[g]	X
Belize	1979	X	X			
Bermuda	1970	X				
Cuba	1934[M],1963[S]	X	X			
Dominica	1975	X	X			
Grenada	1983	X	X		X	
Guyana	1969	X	X			X
Jamaica	1979[M]	X			X	X[f]
Nicaragua	1955	X	X		X[g]	
St. Cristopher and Nevis	1971	X	X			
St. Lucia	1978	X	X			X
St. Vincent	1978	X	X			
Suriname		X				
Trinidad-Tobago	1971	X	X			X

M=Maternity S=Sickness

a In the non-Latin Caribbean, Cuba and Nicaragua exist a national health system (except in Bermuda that has a compulsory hospitalization private insurance) and coverage of all residents, as shown in the table, refers to non-monetary health-care benefits (medical care, hospitalization, etc); in addition, these countries usually have social insurance which grants monetary benefits (these are shown in the table for salary employees, the self-employed and/or domestic servants). In the remaining countries, coverage refers to social insurance, for both non-monetary and monetary benefits.

b Practically all countries exclude unpaid family workers and eight countries exclude temporary workers too.

c Normally covers permanent employees in industry, commerce, mining, transportation, communications, civil service and public utilities. Usually excludes agriculture and domestic service, as well as temporary, home and unpaid-family workers.

d Coverage is geographically limited to capital city and large urban areas.

e Voluntary coverage; in Panama, members of trade unions are compulsorily covered.

f Only in maternity.

g Voluntary continuation of coverage is available to those who shift from salaried to self-employment.

Sources: 79, 113.

medical and hospital care either under a national health system or the public health sector. Social insurance provides monetary benefits for sickness-maternity in all but four countries. The law grants monetary benefits to the self-employed in six countries (compulsorily in four) and to domestic servants in five countries.

Concerning pensions, the law covers all salaried employees in almost two thirds of the 34 countries in LAC and only part of them in the remaining one third (see Table 12). In 21 countries the law protects the self-employed (but compulsorily in nine only) and in 17 countries it includes domestic servants as well (compulsorily in 15). In eight countries the non-insured population is eligible for welfare (non-contributory) pensions, compulsorily in six of them.

In summary, under the legal coverage, in most LAC countries those insured are urban wage earners and their closest dependents, while self-employed persons, agricultural workers and domestic servants, as well as the unemployed, and their dependents, are not covered by social insurance. In addition, in a quarter of the Latin American countries (the least-developed ones) coverage is limited to the capital and the larger cities.

b. Statistical Coverage

Estimates of statistical coverage in LAC are not always reliable. For instance, an ILO report on Brazil acknowledged that coverage data on health care were so speculative that it was impossible to calculate the margin of error: there was no registry for insured, and data on contributions were extremely flawed hence could not be used as surrogates for registration figures. In countries that have a multiplicity of managing institutions it is extremely difficult or impossible to estimate the total coverage, because there are statistics on the large institutions but not on the small ones. Thus, in Mexico, it is easy to obtain data from the largest two institutions (covering salaried employees in the private sector -- IMSS -- and the federal government -- ISSSTE) but extremely difficult from the institutes that cover the armed forces, petroleum and other minor groups. Coverage data published by international and regional agencies are normally limited to the main institutions and, hence, underestimate total coverage. Table 13 shows fair total coverage figures for countries with a multiplicity of institutions that have been subject to careful study (Chile, Colombia, Mexico, Peru and Uruguay) but only gives coverage under the main institute(s) in those countries where in-depth analysis has not been done (e.g., Bolivia, Paraguay, Venezuela). Another problem occurs in countries where a high

Table 12

Legal Coverage of Old-Age, Disability and Survivor Benefits
(Pensions) by Social Insurance in LAC: 1987-1988

Countries	Initial Law	Salaried Employees		Self-Employed	Domestic Servants	Others
		All	Part			
Antigua-Barbuda	1972	X				
Argentina	1930s-50s	X		X	X	X[d]
Bahamas	1974	X		X	X	X[e]
Barbados	1967	X		X	X	X[e]
Belize	1979	X		X[a]		
Bermuda	1967	X		X		
Bolivia	1959		X	X[b]		
Brazil	1920s-30s		X	X[c]	X	
Chile	1924/81	X		X[b]	X	X[e]
Colombia	1945-56		X	X[b]	X[b]	
Costa Rica	1943	X		X[b]	X	X[e]
Cuba	1920s-50s	X		X[b]		X[e]
Dominica	1970	X				
Dom.Republic	1947		X		X	
Ecuador	1930s-42		X	X[b]	X	
El Salvador	1969		X			
Grenada	1969-83	X				
Guatemala	1969		X			
Guyana	1969	X		X	X	
Haiti	1965		X			
Honduras	1971		X	X		
Jamaica	1966	X		X	X	
Mexico	1941		X	X[b]	X[b]	X[f]
Nicaragua	1955		X			
Panama	1941-54	X		X[b]	X	
Paraguay	1943	X				
Peru	1936-60s	X		X[b]	X	
St. Cristopher & Nevis	1970-77	X		X[b]		
St. Lucia	1970		X			
St. Vincent	1970		X			
Suriname	1973	X		X		
Trinidad & Tobago	1971	X			X	
Uruguay	1920s-30s	X		X	X	X[e]
Venezuela	1966	X			X	

a Voluntary continuation of coverage is available to those who shift from salaried to self-employment.
b Voluntary: in Ecuador is compulsory for self-employed professionals; in Mexico coverage is gradually extended; in Panama is compulsory for trade union members.
c Only in urban sector.
d Voluntary insurance is optional for those below 55 who are not working.
e Welfare (non-contributory) pensions for the non-insured are paid by social insurance; in Barbados and Uruguay only available for old age.
f Voluntary insurance is available for the non-insured.

Sources: 79, 130.

percentage of health services are provided by mutual-aid societies, cooperatives and private clinics for which data are almost non-available (e.g., Argentine, Uruguay). The opposite distortion (overestimation of coverage) takes place in pension programs when some of the insured are covered by two or more institutions (e.g. Uruguay in 1960), but this phenomenon has been reduced in recent years. Health coverage of dependents, very important because it involves the largest cohort of insured, is grossly estimated in many countries using a dependent/insured ratio: small changes in that ratio can induce sizable increases/decreases in overall coverage. Therefore, data on coverage of the economically active population (EAP) are generally more reliable than on coverage of the total population. Finally there are problems of comparability, for instance, in the case of Cuba, Table 13 presents estimates based on legal coverage because there are no statistics on coverage. Countries with one single institute managing the entire system provide statistics on total coverage (e.g., the ministry of health in Nicaragua); but other countries, even with highly integrated health systems, often report coverage of social insurance but neither of the MH nor of the "indigent" population covered by social insurance [80].

In spite of the discussed deficiencies, Table 13 offers the most reliable coverage data available. Based on the most recent year available on EAP coverage on sickness-maternity and pensions, countries can be ranked as follows: 80% to 100% in Cuba, Barbados, Jamaica, Brazil and Bahamas; 60% to 79% in Chile, Uruguay, Costa Rica (these three countries would show a higher coverage if welfare programs were included) and Panama; 40% to 59% in Venezuela and Mexico; 20% to 39% in Peru, Nicaragua, Colombia, Guatemala and Ecuador; and 1% to 19% in Bolivia, Paraguay, Honduras, El Salvador and the Dominican Republic. Ranking by coverage of the total population on sickness-maternity is as follows: 80% to 100% in Brazil and Costa Rica (although there are no statistics for Bahamas, Barbados, Cuba and Jamaica, these four countries probably are included in this rank); 60% to 79% in Argentina, Uruguay, Chile (if coverage of "indigents" and mutual-aid societies were taken into account, these three countries would show higher percentages); 40% to 50% in Mexico, Panama and Venezuela; 20% to 39% in Nicaragua and Bolivia; and 1% to 19% in Peru, Paraguay, Colombia, Guatemala, Honduras, El Salvador and the Dominican Republic. As previously noted, the highest coverage is found in the most developed countries which also have the oldest programs (with the exception

Table 13

Total and Economically Active Population Covered by
Social Insurance in LAC: 1960-1980
(in percentages)

Countries	Economically Active Population				Total Population	
	1960	1970	1980	1985	1980	1985
Argentina	55.2	68.0	69.1	79.1[f]	78.9	74.3[f]
Bahamas	n.a.	n.a.	85.3	85.9	n.a.	n.a.
Barbados	n.a.	75.3	79.8	96.9	n.a.	n.a.
Bolivia	8.8[b]	9.0	18.5	16.9	25.4	21.4
Brazil	23.1	27.0	87.0	n.a.	96.3	n.a.
Chile	70.8	75.6	61.2	79.2	67.3	n.a.
Colombia	8.0	22.2	30.4	30.2	15.2	16.0
Costa Rica	25.3	38.4	68.3	68.7	81.5[h]	84.6[h]
Cuba	62.6[a]	88.7[i]	93.0[d,i]	n.a.	n.a.	n.a.
Dominican Republic	n.a.	8.9	n.a.	11.3	n.a.	5.9
Ecuador	11.0	14.8	21.3	25.8	9.2	13.4
El Salvador	4.4	8.4	11.6	n.a.	6.2	n.a.
Guatemala	20.6	27.0	33.1	27.0	14.2	13.0
Honduras	3.7	4.2	14.4	12.8[f]	7.3	10.3[f]
Jamaica	n.a.	58.8	80.9	93.2	n.a.	n.a.
Mexico	15.6	28.1	42.0	40.2	53.4	59.7[e]
Nicaragua	5.9	14.8	18.9	31.5	9.1	37.5
Panama	20.6	33.4	52.3	59.8	49.9	57.4
Paraguay	8.0	10.7	14.0	n.a.	18.2	n.a.
Peru	24.8[b]	35.6[c]	37.4	39.1	16.6	18.6
Uruguay	109.0[g]	95.4	81.2	73.0	68.5	67.0[e]
Venezuela	11.9	24.4	49.8	54.3	45.2	49.9[e]
Latin America	n.a.	n.a.	61.2	n.a.	61.2	n.a.
Excluding Brazil	n.a.	n.a.	42.7	n.a.	42.7	n.a.

a 1958
b 1961
c 1969
d 1981
e 1983
f 1984
g More than 100 per cent due to multiple coverage.
h Includes coverage of the dispossessed ("indigents").
i Estimate based on legal coverage and population censuses.

Sources: 33, 71, 79, 80, 81a, 116, 131.

of the non-Latin Caribbean).

Table 13 shows declines in population coverage in 1985-1988 in: Argentina (total population), Chile (a fall at the beginning of the 1980s and a recuperation later on), Guatemala (both total and EAP), Honduras (EAP), Mexico (EAP) and Uruguay (both). In Brazil, coverage of the manufacturing sector in the EAP decreased from 79% to 62% in 1978-1983 and, although it rose in 1984-1985, it did not recuperate to the previous level [57, 58, 116]. These declines are probably an outcome of the economic crisis which has induced increases in both open unemployment and the informal sector but, in some cases, decreases may have been the result of changes in the calculation of coverage.

In the penultimate line of Table 13, an estimate is made of overall coverage in Latin America in 1980, which is put at 61% for both the EAP and the total population. There is no doubt that in this respect the region stands at the head of the developing countries and that a group of Latin American countries has reached levels similar to those of the developed world. Thus in the pioneer countries (upper group), in one or two countries of the intermediate group and in the non-Latin Caribbean, coverage has been extended rapidly and, if we take into account the protection of the poor (called "indigent") by welfare programs for sickness-maternity and pensions, it has become almost universal. But in most of the countries of Latin America, social insurance coverage is very low and there are structural barriers in the way of its extension. A more detailed analysis of Table 13 shows that the total coverage of the region is strongly influenced by the very high coverage in Brazil, a country which concentrates more than half of all the insured in Latin America. As we have seen, Brazilian data requires more precision, hence the figures of global coverage of Latin America maybe overestimated. When Brazil is excluded from the calculations in the last line of Table 13, coverage in Latin America drops to less than 43% of the EAP and the total population. What is more, in about half the countries, coverage is less than one third and in seven countries is less than 25%.

The previous analysis is based on statistics on coverage which usually are of poor quality. Some pioneer countries do not publish statistics at all (e.g., Cuba) while others only have rough estimates of active insured, much less of their dependents (e.g., Argentina and Uruguay). We lack data on coverage of the total population in the non-Latin Caribbean also. The first estimate of overall regional coverage was done for Latin

America (excluding the non-Latin Caribbean) in 1984 for the year 1980, and there has been no other estimate since then. It is important to update such an estimate (adding the non-Latin Caribbean) to know what has been the impact of the economic crisis of the 1980s on social insurance coverage. Furthermore, we need to have more accurate statistics on coverage for adequate control of evasion and payment delays.

2. Inequalities in Coverage

Alongside the problem of low overall coverage, most Latin American countries suffer from inequality in the degree of coverage among occupational groups, economic activities and geographical areas. Coverage tends to be positively correlated with income, the degree of labor skills, the power of pressure groups and the level of regional development.

a. Occupational Groups

Surveys carried out in seven countries --Argentina, Chile, Costa Rica, Cuba, Mexico, Peru and Uruguay-- show that the historical appearance of coverage of various occupational groups was largely determined by the power of pressure groups, with a gap of almost 200 years between the first and the last groups covered by pensions: those in the armed forces and civil service began to be covered between the beginning of the 1800s and the beginning of the 1990s; teachers between 1880 and 1930; the police between 1890 and the 1940s; the labor aristocracy (public utilities, banks, merchant marine) between 1910 and the 1940s; the great mass of the urban labor force (white- and blue-collar workers) between 1920 and the 1940s; agricultural workers between 1930 and the 1950s; domestic servants between 1930 and the 1970s; and the self-employed between 1930 and the 1970s. One has to take into account the fact that in the majority of the surveyed countries all the groups are covered, although there exist substantial differences in the degree of coverage, in spite of the measures taken to make coverage more universal, unified and uniform in most of them. The differences mentioned are much more significant in the countries with low coverage, inasmuch as the majority of the population is excluded from the social insurance system. A recent analysis for Brazil also shows a positive correlation between coverage, on the one hand, and skill and income on the other, with the lowest coverage being found among the unemployed unskilled workers (especially those in agriculture and self-employment) and the lowest income group [38, 61, 66].

b. Economic Activities

Information from six countries (Colombia, Chile, Costa Rica, Ecuador, Mexico and Peru) on the degree of coverage of the EAP in 1979-1984, by economic branch, indicates that the highest level of coverage is to be found in the electricity, gas and water industry (64% to 100%), manufacturing (40% to 90%) and transport and communications (32% to 71%, except for Ecuador); while the lowest is in agriculture (4% to 59%), with the highest percentages being in Costa Rica and Chile, countries where coverage is almost universal (see Table 14). Information on Bolivia show that, in 1986, 78% of mining and 108.5% of petroleum workers were covered (some by more than one institution) by social insurance, but only 0.2% of agriculture [16].

c. Geographical Units

Finally, information from ten countries (Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Peru and Uruguay) on differences in the degree of geographical coverage in 1979-1986 proves that the states or provinces or departments which are most highly developed (industrialized, unionized, urbanized, having the highest percentage of wage earners and the highest per capita incomes) are covered to a substantially higher degree than the states, provinces or departments which are least developed (agricultural, little unionized, rural, with a high proportion of self-employed persons and the lowest per capita incomes). The extreme range of geographical coverage varies between 6% and 100% in Argentina, 11% and 33% in Bolivia, 39% and 95% in Chile, 3% and 25% in Colombia, 54% and 100% in Costa Rica, 3% and 20% in Ecuador, 17% and 100% in Mexico, 11% and 75% in Panama, 3% and 27% in Peru, and 17% and 69% in Uruguay (see Table 15). With two exceptions, the province or state or department where the capital city is located is the one with the highest coverage.

d. Coverage and Extreme Poverty

Those below the poverty line in Latin America are not normally protected by social insurance. (Exceptions are the countries which protect "indigents" through social insurance/security, e.g., Chile, Costa Rica, Cuba and several in the non-Latin Caribbean). The poor are either unemployed or underemployed, are seasonal or temporary workers, or are employed by a relative without pay and, therefore, are not employed on a permanent full-time basis. They can also be employed but in occupations not covered or with low coverage

Table 14

Inequalities in Statistical Coverage of Social Insurance by Economic Activities of the EAP[a], in Selected Countries of Latin America: Circa 1980

Countries	Agriculture, livestock & fishing	Mining	Manufact-uring	Construc-tion	Electricity, gas & water	Transport-ation & communication	Commerce restaurants, & hotels	Services
Chile	58.6	162.0[h]	89.9	105.8	109.4[h]	71.0	50.8	46.0[c]
Colombia	4.6	11.0	45.0	19.6	67.7	32.3	28.4	38.8
Costa Rica	30.4	----------68.7----------		44.5	----------71.9---------		66.6[b]	79.9
Ecuador	4.3	49.8	42.6	29.6	64.4	14.8	28.9	23.4[g]
Mexico	5.7	21.3	56.0	4.9	96.0	45.2	37.7	143.8[d] 37.3[e]
Peru (1984)	5.5	68.0	39.2	33.6	83.5	43.7	18.7	67.7[f] 49.1[e]

a Percentage of coverage in each activity
b Includes finances and insurance.
c Mixes financial-insurance services with personal-social services.
d Government.
e Other services.
f Finances and insurance.
g Personal, social and domestic services.
h Multiple coverage.

Sources: 80

Table 15

Geographic Inequalities in the Statistical Coverage and Health Facilities in Selected Countries of Latin America: Between 1979 and 1986

Countries	Total Population Coverage (%)	Physicians per 10,000 inhabitants	Hospital beds per 1,000 inhabitants
Argentina (1980)			
Federal Capital	123.9[a]	46.8	8.4
Formosa	6.0[a]	8.1	4.3
Bolivia (1986)			
Oruro	32.8	n.a.	0.9
Pando	10.7	n.a.	0.2
Chile (1980)			
Magallanes	95.0[c]	5.3	4.8
La Araucania	39.3[c]	2.1	3.2
Colombia (1984)			
Atlantico	24.7	n.a.	n.a.
Choco	2.7	n.a.	n.a.
Costa Rica (1979)			
San Jose	33.9[b]	12.4	5.7
Guanacaste	15.2[b]	1.9	1.1
Cuba (1982)			
Havana	n.a.	41.2	11.2
Granma	n.a.	7.2	4.1
Ecuador (1986)			
Pichincha	20.8	14.4	2.8
Los Rios	5.3	4.0	1.6
Mexico (1980)			
Federal District	100.4	21.1[d]	3.3[d]
Oaxaca	17.2	2.4[d]	0.4[d]
Panama (1984)			
Panama	75.2	10.7	5.2
Darien	10.8	4.0	2.7
Peru (1981)			
Lima	26.7	19.0	3.0
Apurimac	2.5	0.3	0.6
Uruguay (1984)			
Montevideo	68.7[e]	35.4	3.8
Rivera	17.0[e]	6.5	1.8

a 1960 b Excludes family dependents c EAP d 1970
e Members of collective institutions, 1986

Sources: 80, 81a, 116.

in the majority of countries, such as agriculture (especially small farmers, sharecroppers, etc.), handicrafts, domestic service and self-employment. The Regional Program on Employment for Latin America and the Caribbean (PREALC) has estimated that, in 1980, 33% of the population of Latin America was below the poverty line and that such proportion increased to 39% in 1985 [104, 106]. According to Table 13, in 1980, 39% of the total population of Latin America was not covered by social insurance, and we have seen that, due to the economic crisis, coverage had not increased significantly in 1985-1988 but declined in some countries. The above analysis on the characteristics of the insured (income, occupation, geographical location) allows us to conclude that the poor are not covered by social insurance and only have access to public health and social welfare services usually insufficient and underfinanced. The LAC countries with the highest degree of social insurance coverage are also those that have the lowest proportion of poor, but even in the most advanced countries the percentage of the population uncovered is greater than the percentage of those below the poverty line [62, 82].

Most of the surveys on inequality in coverage have been conducted in pioneer or intermediate countries, but none in the least developed countries where such inequalities ought to be worse. Furthermore, such surveys were mostly done before the crisis of the 1980s and little or no data are available on the impact of this crisis on the explained inequalities. Finally, the only study available on the lack of coverage of the most needy groups used data until 1980 and, in the 1980s, there should have been an increase of the extreme poverty population.

3. Obstacles to Extend Coverage

A number of experts have pointed out that the Bismarckian model of social insurance has not been able to operate satisfactorily in most of Latin America in spite of the modifications introduced in the original model. This is due to the fact that in the developed countries of Europe, most of the labor force consisted of wage-earning urban workers, while in a large number of Latin American countries, the mass of the labor force is composed of agricultural workers, the self-employed and unpaid family workers. The Bismarckian model finances social insurance through contributions from the worker and employer based on the worker's wage, but in many Latin American countries self-employed persons cannot afford to pay the employer's

Table 16

Percentage Distribution of the Labor Force in LAC:
Between 1980 and 1983

	By Occupational Category[a]			By Sector			
				Urban		Rural	
	Salaried	Self-Employed Workers	Unpaid Family	Formal	Informal	Modern	Traditional
Argentina	71.2	25.1	3.2	65.0	19.4	8.8	6.3
Barbados	78.2	9.8	0.8	n.a.	n.a.	n.a.	n.a.
Bolivia	38.2	48.9	9.2	17.9	23.2	5.2	50.9
Brazil	65.3	27.0	5.1	45.2	16.9	9.8	27.6
Chile	66.7	25.3	3.6	54.1	20.1	14.0	8.8
Colombia	53.5	---------42.5----------		42.6	22.3	15.8	18.7
Costa Rica	75.2	19.6	3.9	52.9	12.4	19.6	14.8
Cuba	94.1	5.7	0.2	n.a.	n.a.	n.a.	n.a.
Dom. Republic	51.3	36.5	3.3	n.a.	n.a.	n.a.	n.a.
Ecuador	47.6	37.3	5.8	22.7	25.4	13.7	37.9
El Salvador	59.2	28.2	10.9	28.6	18.9	22.3	30.1
Guatemala	46.9	42.2	6.7	26.7	17.8	22.3	33.1
Haiti	16.6	59.4	10.4	n.a.	n.a.	n.a.	n.a.
Honduras	45.4	33.3	14.6	n.a.	n.a.	n.a.	n.a.
Mexico	b	b	b	39.5	22.0	19.2	18.4
Panama	63.3	23.2	3.6	45.3	20.9	9.1	24.6
Paraguay	36.7	41.2	11.6	n.a.	n.a.	n.a.	n.a.
Trinidad & Tobago	80.1	14.6	3.5	n.a.	n.a.	n.a.	n.a.
Uruguay	69.4	23.8	2.0	63.3	19.0	9.5	8.0
Venezuela	64.1	26.5	3.1	62.6	16.4	4.4	15.1

a Excludes a small percentage of non-classified workers. Years do not correspond to 1980-83 in: Bolivia (1976), Honduras (1977) and Uruguay (1975). There are no figures available for Bahamas and Jamaica.

b Results of the 1980 census are not reliable, they give a very high percentage (22%) of non-classified workers.

Sources: 80

contribution, and agricultural workers have low incomes, are scattered and are frequently migrant, often changing employer.

The first (left) segment of Table 16 shows that in the most-developed countries of the region, wage earners comprise from 63% to 94% of the labor force (Argentina, Barbados, Brazil, Chile, Costa Rica, Cuba, Panama, Trinidad-Tobago, Uruguay and Venezuela) and less than a third of the labor force is either self-employed or works for a family member without pay. This explains why the Bismarckian model has been able to function and extend its coverage in these countries. On the other hand, in the least-developed countries (e.g., Bolivia, Guatemala, Haiti, Honduras, Paraguay and Peru), from 48% to 70% of the labor force is either self-employed or an unpaid family worker (and a similar proportion is engaged in agriculture). These countries are precisely those which have the lowest social insurance coverage, and with the Bismarckian model, the extension of coverage in them is very difficult if one goes beyond the limits of the salaried labor force.

In research recently conducted on determinants of social insurance/security coverage of the EAP in all Latin American countries, several independent variables were tested and the regression showed that the percent of the salaried EAP explained .622 of coverage. A dummy variable "political commitment" was introduced whose value was "1" when state initiative was present (e.g., through law and direct state action on social security) and "0" when it was absent. The best fit was obtained when the two variables -- salaried EAP and political commitment -- were regressed jointly, and they explained .793 of coverage [84]. These empirical findings prove what the specialists have alleged for years.

a. Protection of the Informal Sector

Another way to approach the problem of universal coverage is to look at the size of the formal sector. The second (right) segment of Table 16 presents the distribution of the EAP by sectors: formal, informal, modern and traditional.

When one compares the percentage of the EAP in urban-formal sector (Table 16) with the percentage of the EAP covered by social insurance (Table 13) one finds in most LAC countries a remarkable correspondence between both. A few countries have been able to extend coverage somewhat beyond the formal urban sector, either because they have a relatively modern and unionized rural sector (e.g., Chile, Costa Rica) or because,

having a large traditional rural sector, they have created new methods of financing: the urban sector provides at least partial support for the extension of primary health care coverage to rural areas (e.g., Brazil) or the state and social insurance provides such coverage (e.g., Mexico). In Colombia and Venezuela, the percentage covered by social insurance is substantially less than the percentage in the formal urban sector, indicating that these countries -- particularly the latter, which has relatively abundant resources -- could make a greater effort to extend coverage, even within the narrow limits of the Bismarckian model. In only two countries (Brazil and Uruguay) does social insurance coverage exceed the sum of the formal urban and modern rural sectors, which indicates the obstacles in the way of extending coverage to the informal urban and traditional rural sectors. In these two sectors we find self-employed and unpaid family workers who are typically underemployed and have low incomes, which means that it is difficult for them to finance their own coverage [7, 52, 66].

The possibilities of rapid extension of social insurance coverage seem remote for many LAC countries. Between 1950 and 1980 (years of rapid economic expansion in the region), the formal urban sector grew by more than 14% in the region, but the modern rural sector shrank by almost 10%. The growth of the formal sector was insufficient to absorb the increase in the supply of labor together with the intense rural-urban migration and the previously existing levels of underemployment. (Methods of production which put emphasis on capital vis-a-vis labor hamper labor absorption.) In the same period, the traditional and informal sectors in the region declined by 4% (the traditional sector dropped by almost 10%, but the informal sector increased by almost 6%). To reduce the traditional and informal sectors by a third by the year 2000, it was calculated that an annual growth in GDP of 7.5% would be needed. But due to the economic crisis of the 1980s there has been an annual average negative per capita growth rate in the region: -8.3% in 1980-1989. Employment in the formal sector declined by 6% in 1980-1985, while employment in the informal sector increased by 5% and the rate of unemployment rose by 1% [26, 103, 104]. According to Table 13, coverage of the EAP by social insurance declined in some countries, probably due to causes explained above.

Table 17 offers data on coverage of the informal sector by social insurance in nine LAC countries in 1980-1987. As a percentage of the EAP, the informal sector ranges from 20% in Chile to 62% in Peru. The percentage of coverage of the self-employed (a very important component of the informal sector) oscillates:

from 0.6% to 4% in six countries (Colombia, Mexico, Panama, Costa Rica -- in pensions, Jamaica and Peru), form 12% to 48% in three countries (Chile, Barbados and Bahamas) and reaches 93% in the sickness-maternity program in Costa Rica (due to coverage of "indigents"). Although coverage of the self-employed is mandatory in Jamaica, only 4% of them are actually covered. One of the reasons of the low coverage of this sector is the heavy contributory burden. Table 17 shows that the percentage of contribution to be paid by the self-employed is from two- to four-fold the percentage to be paid by the salaried worker; the only exception is Chile where both have similar percentage contributions. This not only largely explains the low coverage of this group but the high degree of evasion and mora in countries with mandatory coverage [79].

With the growth of the informal sector in the 1980s it is even more important and urgent to study alternative ways to protect this sector both of a conventional type (social insurance) and unconventional (mutual aid societies, collective insurance policies with low premia, solidarity groups). A recent study conducted by PREALC analyzes in detail the cases of Costa Rica, Jamaica, Mexico and Peru and give policy recommendations. But we need to extend such analyses to other LAC countries.

b. Protection of the Rural Sector

Several LAC countries have advanced in the extension of social insurance/security coverage to the rural sector: in the non-Latin Caribbean, Cuba and Nicaragua through national health systems; in Chile and Costa Rica through welfare programs on pensions and sickness-maternity; and in Cuba and Uruguay through welfare pension programs. In three Latin American countries (Mexico, Brazil and Ecuador) coverage of peasants have been extended through innovative programs explained below.

In Mexico, the general institute (IMSS) began to extend its coverage to rural areas in 1954 but the first significant push occurred in 1973 with the creation of the "Social Solidarity" program which is financed 60% by the federal government and 40% by IMSS. In 1976 a National Institute to Coordinate Aid for Marginal Zones (COPLAMAR) was established and, in 1979, it developed an agreement with IMSS to extend primary health care to marginalized rural zones. By 1985, IMSS-COPLAMAR had built 3,246 rural clinics and 65 rural hospitals. But in the mid 1980s the federal government decided to transfer part of those facilities to the states and, in 1986, twelve states were already in full charge of them. After an interruption, due to protests for the

Table 17

Statistical Coverage of the Informal Sector by Social Insurance/Security in Selected Countries of LAC: 1980-1987

	% Informal Sector over EAP[a]	% Coverage Informal Sector[b]	% Contribution over Income paid by: Salaried	Self-Employed
Bahamas	n.a.	48.4	1.7-3.4	6.8-8.8
Barbados	n.a.	24.8	4.6-5.5	8
Chile	20.1[c]	11.9-17.5	20.6-28.5	19.4-27.4
Colombia	22.3[c]	0.6	4.5-6.2	15-20
Costa Rica	21.6	2.0-93.0	9	12.2-19.5
Jamaica	37.7	4.0	2.5	5
Mexico	30.9	0.8	3.75	13.57
Panama	20.9[c]	1.5	7.25	18-22
Peru	61.9	4.0	6	18

a Self-Employed workers, plus domestic servants, plus unpaid family workers over EAP; excludes informal wage earners.
b Only self-employed.
c All the informal sector.

Source: 79.

decline in the level of transferred services, in 1987 the process of decentralization was resumed. The rural zones to establish this program were initially selected on the basis of 19 indicators of marginality (e.g., the poorest zones with high proportion of Indian population), as well as the size of the community and political criteria such as the level of rebellion or protest. The highest level of coverage by IMSS-COPLAMAR was reached in 1985 with a population of 13.7 million or 85% of the targeted population but, in 1986, 9.8 million were under IMSS-COPLAMAR and the rest under the states administration. Those covered are eligible for the following services: materno-infant care, medicines, identification and control of chronic diseases, family planning, health prevention and education. These services are provided: at the primary and secondary levels by clinics and hospitals of IMSS-COPLAMAR and, at the tertiary level, by hospitals of the Secretary of Health (not by IMSS hospitals). The program counts with pasantes (physicians who have just finished their education and ought to serve one year of social service) as well as "assistants" who are bilingual young females recruited from the community. In 1986, the budget of the program was 90.6% financed by the federal government and 9.4% by IMSS, but the latter also contributed indirect administrative costs estimated to be half of real total costs of the program. Those covered do not pay monetary contributions but perform collective work in various tasks such as the construction of the facilities, prevention, sanitation, etc. The per capita cost of IMSS-COPLAMAR services was less than one half the cost of the Secretary of Health services and these, in turn, were much lower than the cost of IMSS services. The health effect of IMSS-COPLAMAR on the rural population is difficult to measure particularly after 1985 due to the explained fragmentation. However, available information indicates a reduction of respiratory and intestinal diseases as well as those preventable through immunization. Conversely there are reports of increases in malnutrition, tuberculosis and rheumatic fever but these increases could have been the result of better identification and reporting of such diseases. Noted deficiencies of IMSS-COPLAMAR are: a single model not adequate for all rural communities; low rates of hospital occupancy mainly in zones with a high Indian concentration; too short a period of work of pasantes and need to increase the role of assistants; scarce effective community participation; and lack of a concrete plan for collective work [115]. The post 1985 fragmentation and the economic crisis appear to have had negative effects on the program (see VII.4).

In Brazil, the social security system (SINPAS) extended coverage to rural areas in the 1970s through two programs: one of social insurance (FUNRURAL) and another of the federal ministry of health (MH) and states' health services (PIASS). FUNRURAL began independently in 1971 granting welfare pensions and health care to the rural population and towns with less than 20,000 inhabitants; it had a network of facilities (health posts and centers, policlinics and hospitals) developed through agreements with trade unions, states, municipalities and private institutions. In 1977 FUNRURAL became part of the social insurance system and financed by three taxes: 2.4% on the payroll of urban enterprises (this tax generated 63% of the total revenue in 1980); 2.5% on rural production, collected by the producer and paid by the buyer (35% of total revenue); and 0.036% paid by rural employers based on the value of agricultural production or the value of non-cultivated farms (2% of total revenue). From 1978 through the early 1980s the program ended in deficit (11% of revenue in 1981) which resulted from an evasion estimated to be from one-third to one-half of the potential revenue of the three taxes combined. To help finance the program, in 1982, FINSOCIAL was created with a contribution of 0.5% of the revenue of all enterprises in the nation. In addition to its financial imbalance, FUNRURAL had the following flaws: a basically curative model not adapted to the sector needs; predominance in the allocation of resources to urban over rural zones and developed over underdeveloped regions; insufficient and deteriorated equipment and low quality of services; scarcity of medicines; restricted access to hospitals and high user fees which have precluded the lowest income group to use the services. PIASS was created in 1976 to provide primary health care to rural zones and small towns, and it rapidly extended throughout the nation, first under the MH and later depending on the states. In 1979 the program suffered a grave financial crisis and was rescued by social insurance but at the price of a change in its approach that became predominantly curative and with less community participation. At the beginning of the 1980s there was a plan to create a national health system which would integrate all existing programs (including FUNRURAL and PIASS). Features of the plan were a two-fold increase of the federal government financing, priority to primary health care and increase in the role of community assistants [54,107]. By the end of the decade, the integration had been largely achieved, hence the special program had disappeared as such; we lack information on current services granted to the rural population.

In Ecuador, the Peasant Social Insurance (SSC) began in 1968, as part of the social insurance institute (IESS), and was pushed forward in 1973 and 1981. Eligible are peasants (and their dependent family) organized in cooperatives and agrarian associations; in 1987 SSC covered 4.8% of the total population and 10% of the rural population. Emphasis is on primary health care at low cost and the services are based on a rural post built in community land with a basic structure supplied by IESS and erected through community work. A traveling physician offers medical, maternity and dental care at the post, while auxiliary permanent personnel provides prenatal care, health education and immunization. Those patients who cannot be cured at the rural post should be referred to more complex IESS facilities. The program is financed with a 1% contribution on the payroll of all those insured at IESS (paid in equal parts by the insured, the employer and the state) plus the equivalent of 1% of the minimum wage which is paid by the participant peasant (in 1985 the minimum wage increased two-fold thus making very heavy the peasant contribution). It is neither possible to estimate the SSC costs nor its financial stability but, being a part of IESS, it can be guessed that it is deficitary; scattered information suggests that hospitalization costs are high. Coverage has increased at a low rate in 20 years and there are indicators of: discrimination against the poorest most isolated peasant population, a low number of referrals to higher levels of attention, and differential treatment between peasants and insured at IESS facilities. Furthermore the SSC is not coordinated with the rural health system of the MH, its number of immunizations is small, and it pays lip service to basic sanitation. The economic crisis of the 1980s negatively affected this program [63, 81a].

In spite of the importance of these three programs, there are very few serious studies of their characteristics, effects and potential for replication elsewhere. The first independent and fairly comprehensive evaluation of IMSS-COPLAMAR was done in 1988-1989; the most recent review of FUNRURAL was conducted in 1984 with 1981 data -- therefore prior to the crisis; and there is no adequate evaluation of SSC. It is necessary to conduct an up-to-date comparative analysis of these three programs as well as others from LAC (e.g., those which provide welfare coverage on pensions to the rural sector such as Costa Rica's) in order to estimate their costs, effectiveness, ways of improvement and potential for replication.

4. The Cost of Universalization of Coverage

The cost of extending social insurance coverage to all the population of LAC countries with the current Bismarckian model would not be economically viable in many countries even if they were able to overcome the structural barriers. Table 18 shows how social insurance expenditures over GDP would increase in 22 LAC countries if coverage were granted to the whole population with the current model. Social insurance expenditures were used in Table 18, rather than all social security expenditures as in Table 1, because the former are more statistically precise and correspond better to the social insurance covered population, thus excluding the population protected by public health programs. The estimates in the third column of Table 18 were obtained by roughly extrapolating the expenditures for a 100% coverage, assuming that such expenditures would increase proportionally with coverage.

While linear extrapolation of current costs and coverage may be useful to establish broad orders of magnitude for the costs of universal coverage in the concerned countries, this may not be an accurate portrayal for a number of reasons. First, it is difficult to establish the effects of joint provisions, such as health care and pensions, as opposed to either of these in isolation. Intercountry comparisons are also difficult since different countries have varying coverage for various programs. Further, there are two factors which might increase costs of universal provision beyond that implied by linear extrapolation: (i) the non-covered population is poor and has a lower health status than the covered population, thus it probably suffers from a higher incidence of sickness and cannot afford private medicine, and hence it might use social insurance/security services more; and (ii) administrative costs to cover the informal and rural sectors might be higher than for the covered formal sector because of difficulties in detecting, controlling and collecting from the former. On the other hand, the non-covered population probably has a lower life expectancy than the covered population and hence pension costs of the former could be lower. Finally, in the less developed countries where current coverage is low, most social insurance expenditures go to sickness-maternity care rather than pensions, hence the net outcome might be higher costs than the simple extrapolation of Table 18 suggests.

According to Table 18 six countries would reach universal coverage with a relatively low percentage of GDP; Jamaica (0.5%), Bahamas (0.8%), Barbados (1.2%), Venezuela (2.9%), Mexico and Brazil (5.4%). The

Table 18

Social-Insurance Expenditures as a Percentage of GDP, in 1980, and Extrapolated on the Base of Universal Coverage, in LAC

Countries	% Social Insurance Expenditures as % of GDP (1980)[a]	% of Total Population Covered (1980)[a]	Extrapolation of % of Social Insurance Expenditures over GDP when 100% of Population is covered
Argentina	11.9	78.9	15.1
Bahamas	0.7	85.3[b]	0.8
Barbados	1.0	79.8[b]	1.2
Bolivia	2.9	25.4	11.4
Brazil	5.2	96.3	5.4
Chile	11.0	67.3	16.3
Colombia	2.8	15.2	18.4
Costa Rica	7.5	81.5	9.2
Cuba	8.6	100.0[c]	8.6
Dominican Rep.	0.7	5.9[d]	11.9
Ecuador	3.7	9.4	39.4
El Salvador	1.3	6.2	21.0
Guatemala	1.6	14.2	11.3
Honduras	0.9	7.3	12.3
Jamaica	0.4	80.9[b]	0.5
Mexico	2.9	53.4	5.4
Nicaragua	2.3	9.1	25.3
Panama	6.1	49.9	12.2
Paraguay	1.2	18.2	6.6
Peru	2.6	16.6	15.7
Uruguay	8.1	68.5	11.8
Venezuela	1.3	45.2	2.9

a Most figures are author's calculations and refer to social insurance coverage, hence they are not always the same as in previous tables.
b Economically active population covered by monetary benefits, the total population is legally covered on health-care by public health.
c Legal coverage.
d 1985.

Sources: 84

three non-Latin Caribbean countries have the lowest projected costs because they exclude public health-care expenditures and due to the newness of their pension programs; if the cost of health care had been included (to make it more comparable with social insurance sickness-maternity costs in Latin America), their extrapolated percentages would be more in line with that of Brazil. Mexico's and Venezuela's very high GDP, due to the oil boom, reduce the relative cost of their coverage (also Venezuela has one of the newest pension programs in the region). Finally, Brazil and Mexico have significantly expanded coverage to the rural sector with innovative programs at relatively low cost, and that partly explains the small extrapolated percentage in both countries.

Next with higher extrapolated percentages are Paraguay (6.6% but there are serious reservations on the quality of data of this country), Cuba (8.6%) and Costa Rica (9.2%); the last two already cover all or practically all their population. Another group of countries which already approximates universal coverage, but with ever higher extrapolated percentages, are Uruguay (11.8%), Argentina (15.1%) and Chile (16.3%). But these three countries (as well as Costa Rica) have either social insurance (or public health) programs for the dispossessed, hence the extrapolation exaggerates the cost of universal protection.

In some of the least-developed countries of Latin America the extrapolated cost (percentage) of universal coverage would be intolerable: Ecuador (39.4%), Nicaragua (25.3%), El Salvador (21%), Colombia (18.4%), Peru (15.7%). Extension of coverage in the region (particularly in the less developed countries) cannot be attained with the present levels of benefit and the current administrative structure, as the financial burden would be intolerable (as has happened in some of the pioneer countries) [80, 84].

According to the available information, careful estimates of the cost of extending coverage to all the population has been done solely in Peru, and only recently. In the fall of 1988, a USAID-supported team of international and Peruvian experts undertook the calculations of covering various unprotected groups (e.g., informal sector, peasants) at two levels of health-care attention: primary and integral (both based on costs of the Peruvian Institute of Social Security -- IPSS). The results show that the cost of reaching universal coverage at the integral level would be twice as high as the current costs of the covered population, while at the primary level they would be about the same. Even the second alternative would be very difficult to

implement without a substantial state subsidy because the non-covered population has a lower income than the covered population or no income at all, and it is administratively difficult to detect, register and control. On the other hand, the USAID study estimated that, with the lower per capita costs of the more frugal MH program, it would have been possible to reach universalization with a fraction of the primary health care costs of the IPSS program [78].

In summary, one of the most serious problems of social insurance/security in LAC is how to expand population coverage and reduce its inequalities in spite of the structural economic and political obstacles that such tasks face in the region, particularly during the current crisis. It is surprising that practically only one country study has been done so far estimating the costs of expanding coverage. This study confirms that the current social insurance model is not suitable for that task and that alternative, financially viable models, should be found. It is fundamental, therefore, that the few existing models of extending coverage to the rural population (e.g., in Brazil, Mexico, Ecuador, Costa Rica, the non-Latin Caribbean), are carefully evaluated. In addition, various studies should be conducted in least developed Latin American countries to explore the possibility of providing primary health-care coverage with public health facilities. Finally the two previous sections of this study show that, in most of LAC, the current cost of coverage is too high and it is practically impossible to increase it. Hence it is indispensable to cut such costs (benefits and administration), aspects to be discussed in the subsequent sections.

5. Recommendations on Policy and Research

To increase and make more equitable the population coverage it is recommended: (i) improve the quality of statistics on coverage; (ii) extend coverage, with the ultimate target of universality, using non-conventional models of financing and benefits to incorporate the informal and rural sectors in those countries which face structural barriers to such an extension; and (iii) reduce non-justified inequalities in coverage among occupational groups, economic activities, and geographical units.

The following topics should be investigated: (i) estimate total population coverage in LAC updating the current 1980 estimate to the end of the 1980s (and adding figures for the non-Latin Caribbean); (ii) conduct ad hoc surveys on real access to benefits of the legally-statistically insured (or include the proper questions

in broader surveys or censuses); (iii) evaluate existing models of non-conventional extension of coverage to rural marginalized populations (e.g., IMSS-COPLAMAR, FUNRURAL, SSC); (iv) expand the study of conventional and non-conventional ways of protecting the informal sector, to other LAC countries; and (v) estimate the cost of population coverage extension (to various groups at different levels of protection) to several countries, especially those in the lower group.

IV. BENEFITS

LAC social insurance and health-care benefits are the most advanced in the Third World and in two programs (e.g., sickness-maternity, family allowances) are ahead of a few industrialized countries such as the United States. However some experts argue that such largess has had a negative impact in terms of savings and investment, and hence affected the process of growth and development in LAC, without satisfying basic needs of a substantial part of its population and correcting existing inequalities. The crisis of the 1980s has threatened LAC accomplishments in this field and provoked an erosion in the amount and quality of benefits in many countries.

The bulk of social insurance/security expenditures in LAC is on benefits: from 78% to 97%: ILO data on the distribution of social insurance plus family-allowance expenditures by program indicates that the highest proportion is spent by pioneer countries on pensions, but by late-comer countries on sickness-maternity (see Table 19). The non-Latin Caribbean countries are apparently an exception because, according to the table, they allocate the bulk of their expenditures to pensions. Actually this phenomenon is the result of two factors: the exclusion of public health expenditures from the table, and the fact that, in sickness-maternity, social insurance only pays monetary benefits. (If all social security expenditures are considered, the bulk of expenditures of non-Latin Caribbean countries is on health until 1977, but not thereafter due to the exclusion of public health expenditures from the ILO series since 1978.) Based on Table 19, a comparison of the Latin American percentage distribution of benefit expenditure by program, in 1965 (1961-1977 in some countries) and 1983, allow us to identify an increasing trend in the percentage go in to pensions (a regional average of 24% versus 51%) and a declining trend in the percentage going to health maternity (57% versus 49%). This

Table 19

Percentage Distribution of Benefit Expenditure of Social Insurances and Family Allowances in LAC: 1965-1983

		Sickness Maternity	Pensions	Employment Injury	Family Allowances	Unemployment	Total
Argentina	1975	14.5	58.3	0.0	27.2	0.0	100.0
	1983	27.1	58.6	0.0	14.3	0.0	100.0
Bahamas	1980	27.4[a]	72.5	0.1	0.0	0.0	100.0
	1983	18.2[a]	81.1	0.7	0.0	0.0	100.0
Barbados	1971	65.4[a]	25.2	9.4	0.0	0.0	100.0
	1983	12.9[a]	82.5	1.4	0.0	3.2	100.0
Bolivia	1961	55.4	13.7	0.0	30.9	0.0	100.0
	1983	40.9	44.7	9.9	3.8	0.7	100.0
Brazil	1970	47.2	40.2	3.4	9.2	0.0	100.0
	1983	33.7	62.3	0.6	3.3	0.0	100.0
Chile	1965	16.6	36.2	0.0	45.9	1.3	100.0
	1983	15.4	68.4	2.6	10.0	3.6	100.0
Colombia	1965	63.3	0.0	1.2	35.4	0.0	100.0
	1983	62.9	28.8	8.3	0.0	0.0	100.0
Costa Rica	1965	77.8	4.7	17.5	0.0	0.0	100.0
	1983	68.6	26.9	4.5	0.0	0.0	100.0
Cuba	1980	13.0[a]	85.2	1.8	0.0	0.0	100.0
Dominican Republic	1977	72.0	25.3	2.7	0.0	0.0	100.0
	1982	73.1	25.7	1.2	0.0	0.0	100.0
Ecuador	1965	18.9	63.3	0.0	0.0	17.8	100.0
	1983	16.9	75.8	1.6	0.0	5.7	100.0
El Salvador	1965	91.2	0.0	8.8	0.0	0.0	100.0
	1983	75.8	17.8	6.4	0.0	0.0	100.0
Guatemala	1970	50.3	0.0	49.7	0.0	0.0	100.0
	1983	42.6	16.4	41.0	0.0	0.0	100.0
Honduras	1965	96.3	0.0	3.2	0.0	0.0	100.0
	1983	91.3	8.7	0.0	0.0	0.0	100.0
Jamaica	1975	0.0[a]	92.0	8.0	0.0	0.0	100.0
	1983	0.1[a]	94.3	5.6	0.0	0.0	100.0
Mexico	1965	73.3	16.7	10.0	0.0	0.0	100.0
	1983	67.0	22.5	10.1	0.4	0.0	100.0
Nicaragua	1965	89.4	4.7	5.9	0.0	0.0	100.0
	1983	27.9	63.7	8.4	0.0	0.0	100.0
Panama	1965	60.4	39.6	0.0	0.0	0.0	100.0
	1983	54.5	41.9	3.3	0.0	0.4	100.0
Peru	1981	60.0	32.1	7.9	0.0	0.0	100.0
	1983	58.7	34.1	7.2	0.0	0.0	100.0
Trinidad & Tobago	1975	21.4[c]	71.4	7.2	0.0	0.0	100.0
	1983	7.3[a]	89.4	3.3	0.0	0.0	100.0
Uruguay	1975	3.6	73.6	1.9	16.9	4.0	100.0
	1983	8.8	76.1	0.0	10.7	4.5	100.0
Venezuela	1965	79.9	0.0	20.1	0.0	0.0	100.0
	1975	65.8	34.2	0.0	0.0	0.0	100.0

a Only monetary benefits; medical-hospital care is not provided by social insurance.

Sources: 39, 93.

is the result of demographics and the age of the pension programs, factors already explained.

1. Generosity of Benefits and Entitlement Conditions

The pioneer countries tend to cover all the social risks and to provide a greater number of benefits and more liberal ones. Argentina, Brazil, Chile and Uruguay are the only countries which cover all the risks -- including unemployment and family allowances (Cuba does not include these last two schemes). A study of five countries (Argentina, Chile, Mexico, Peru and Uruguay) based on information from the beginning of the 1970s demonstrated that the older the social insurance/security system, the greater the number of benefits provided. The old systems have granted exceptional and costly benefits as well as more liberal entitlement conditions than those available in countries of the intermediate and lower groups [66].

Once these benefits and conditions are set by law it is very difficult to reduce or make them more strict. Actually we have observed the opposite trend, in other works, the liberalization of the initial benefits/conditions due to political pressure. For instance, in Brazil, there has been no cut in benefits since the system was established but steady increases and, in spite of the crisis, in 1988 more than half of the legal drafts being discussed in Congress dealt with increment of social security benefits [58, 59].

a. Pensions

Table 20 summarizes the entitlement conditions (age and years of service) for normal old-age retirement, as well as of early retirement and seniority retirement (based on years of service regardless of age) in some countries; the table also shows life expectancy at the time of retirement. The lower the country ranking (the lower the number), the more strict the conditions for retirement and the lower the pensioner's life expectancy. Note that some countries have special schemes (usually for part or all civil servants) with more liberal conditions and higher average years of retirement than in the general system. Among these special schemes is the seniority pension (in Brazil, Costa Rica, Uruguay) which entitles the insured to retire with 20 or 30 years of service regardless of age, hence allowing retirement as early as 35 or 45 years of age. The difference between the general system and the special schemes within the same country is quite significant, for instance, Costa Rica ranks 5th by the general system of normal retirement (65 years of age for both sexes) but 17th on the basis of early retirement (57 years of age for men and 55 for women), and 28th and 29th on the basis of

the special schemes. Brazil ranks 10th by the general system but 30th by seniority retirement, and Uruguay ranks 15th and 31th, respectively. Special schemes in these countries enjoy the most liberal conditions in the entire region.

Under the special schemes, the average time period of a pension is highest among pioneer countries, e.g., 25.6 and 28.6 years in Costa Rica, 25.4 and 28.3 years in Uruguay, and 24.1 and 26.9 in Brazil. Even without a special scheme, Cuba falls within this group with 18.9 and 24.6 years. However, Argentina and Chile have much lower averages due to reforms that unified and standardized their systems. The average pension period in the special scheme is from 8 to 13 years higher than in the general system reaching a ratio of 2 to 1 in Costa Rica. Even worse, in Uruguay, the seniority pensioner enjoys an average period of retirement longer than the average period of work and contribution.

In the pioneer countries, the age of retirement was set early in the century when life expectancy was lower, but it has been politically impossible to raise the retirement age as life expectancy has increased. In the 1970s and 1980s, Costa Rica introduced a general system of early retirement with required ages that were gradually reduced as life expectancy increased. In Uruguay, in the 1950s and 1960s, the age of retirement for privileged groups was cut down. In 1975, Panama established early retirement for privileged groups. In addition, in 13 out of 23 countries in Table 20, the age of retirement of women is five years lower than men in spite of the fact that the former lives an average of from two to four years longer [75, 110, 126].

Late-comer countries have the highest retirement ages and the lowest life expectancy of the three groups, therefore, their average time pension periods are the lowest; e.g., 13.4 and 13.8 years in Honduras and 13.6 and 14 years in Guatemala. A comparison of extreme cases in the upper and lower groups, Costa Rica and Honduras, show that the former's average time pension period is twice the average of the latter.

Table 21 compares the years used to calculate the average base salary for pensions, as well as the minimum and maximum set for pension amounts; the lowest numbers in the ranking are assigned to the most stringent entitlement conditions and viceversa. Salaries tend to increase with job seniority. Therefore, the shorter the years of work used for the calculation of the salary base and the closer they are to the time of retirement, the higher the salary base would be and, hence, the pension amount. This practice is even more important in

Table 20

Comparisons of Legal Retirement Age and Life Expectancy of Retired People in LAC: 1980-1985

Countries	Age Years		Years of Service	Ranking[a]	Average Life Expectancy at Time of Retirement		Ranking[b]
	Men	Women			Men	Women	
Argentina	60	55	15	18	16.2	24.2	17
Bahamas	-----65-----		3	5	n.a.	n.a.	n.a.
Barbados	-----65-----		3	5	n.a.	n.a.	n.a.
Bolivia	55	50	15	26	17.2	22.2	18
Brazil	65	60	10	10	14.2	18.3	7
Special Sch.	----Any[d]---		30	29	24.1	26.9	23
Chile	65	60	15/10	9	13.2	19.4	6
Colombia	60	55	10	22	15.6	21.4	13
Costa Rica	------65-----		10	3	14.0	16.0	4
	57	55	34	17	19.1	24.2	21
Special	------50[c]----		30	28	25.6	28.6	26
Schemes	-----Any[d]---		30	29	25.6[e]	28.6[e]	26
Cuba	60	55	25	16	18.9	24.6	22
	------65-----		35	1	13.2	15.9	2
Dominican Rep.	------60-----		15	12	16.3	18.2	11
Ecuador	------55-----		30	23	20.2	21.2	19
El Salvador	65	60	14	8	14.2	19.9	9
Guatemala	------65-----		15	2	13.6	14.0	3
Haiti	------55-----		20	24	17.4	17.9	13
Honduras	65	60	15	7	13.4	13.8	1
Jamaica	65	60	3	11	n.a.	n.a.	n.a.
Mexico	------65-----		10	3	14.4	15.7	5
Nicaragua	------60-----		15	12	15.8	16.2	8
	60	55	15	18	18.1	19.6	15
Panama	55	50	15	27	21.9	27.8	23
	------60-----		15	12	16.2	17.9	9
Paraguay	------55-----		20	24	19.9	21.7	20
Peru	60	55	15/13	21	15.2	20.7	10
Uruguay	60	55	30	15	16.2	24.1	15
Special Sch.	----Any[d]---		20	31	25.4	28.3	25
Venezuela	60	55	15	18	16.9	23.5	18

a Ranked based on combined higher age and years of service, i.e., the lower the rank number the more strict the entitlement conditions, and viceversa.

b Ranked by lowest-highest average retirement years=(men+women)/2; i.e., the lower the number the less the years, and viceversa.

c Finance, Public Works, Communications.

d Teachers, Public Registrar.

e It is assumed that 50 is the age of retirement but technically can be less, for instance, if entrance into the labor force is at 15 years of age, the insured can retire at 45 years, thus increasing the average years of retirement by five years. In Uruguay, it is possible to retire at 35 years of age, increasing the average by 15 years.

Source: 75.

countries with high rates of inflation. With the exception of two countries which use the salary earned in the last 10 years of work, the majority use the last 3 to 5 years of work; but Costa Rica's special scheme uses either the last year or the last month of work, and Bahamas's use the last month too.

Five countries set the maximum pension as 100% of the salary average (this appears to be the case in four other countries) and four countries set such a maximum from 90% to 95% (see Table 21). In Costa Rica's special scheme the said 100% rate is applied to either the last year or last month of work thus the resulting pension is practically equal to the salary. Costa Rica, Brazil and Argentina have the most generous conditions while Honduras and the Dominican Republic have the most strict conditions.

Adjustment of pensions to the cost of living has been generous as well, at least until the crisis of the 1980s. In Argentina, pensions are adjustable to 82% of the last salary earned and in Bolivia are adjusted to 90% [60, 116]. Table 22 demonstrates that in several countries, pensions were adjusted and even exceeded the rate of inflation. Taking 1975 as the base year, real pensions in 1980 had increased: 31% in Costa Rica, 48% in Chile, 53% in Ecuador, 42% in Jamaica, 24% in Panama (1985) and 28% in Uruguay (1982). Nevertheless, the highest real pension was reached in some of these countries prior to 1975.

b. Sickness-Maternity

Benefits and entitlement conditions of the sickness-maternity program are equally liberal, particularly in Latin America. According to Table 23, eight countries neither require a waiting period nor contributions to be eligible for paid sickness leave, it is enough to be employed and insured (this is true for maternity benefits in two of these countries). Six countries require a waiting period from four to six weeks, to receive paid sickness leave. Furthermore, in three countries sickness leave is paid at a rate equal to 100% of the salary, and in the two other countries at a 90% rate (in eleven countries maternity leave is equal to the salary). In the non-Latin Caribbean, the waiting period is usually longer and paid leave averages 60% of the salary; and two of these countries do not have this benefit at all. Finally, in the majority of LAC there is no waiting period for medico-hospital benefits.

The explained conditions are strong incentives to simulate sickness and collect paid leave (a problem reported in several countries) thus significantly increasing the costs of the program. In countries where the

Table 21

Comparison of Calculations of Old-Age Pensions in LAC: 1985

Countries	Base salary (average)	Basic rate(%)	Maximum Rate(%)	Ranking[a]
Argentina	3 best years in 5 last years of work	70	82	20
Bahamas	last month	40	60	15
Barbados	3 best years in last 15 years	50	60	8
Bolivia	1 or 2 last years	30	100	16
Brazil	3 last years	70	95	22
Chile	5 last years	50	70	3
Colombia	3 last years	45	b	21
Costa Rica	4 best years in last 5 years	55	90	16
Special Sch.	last month[c]	66	100	24
	last year[d]	66	100	23
Cuba	5 best years in last 10 years	50	90	12
Dominican Rep.	4 last years	40	70	2
Ecuador	5 best years	44	100	9
El Salvador	3 last years	40	90	11
Guatemala	5 last years	40	b	10
Haiti	10 last years	33	b	6
Honduras	5 last years	40	80	1
Mexico	5 last years	35-40	80	4
Nicaragua	3 last years	40-45	80	12
Panama	3, 4 or 5 best years in last 15 years	60	100	19
Paraguay	3 last years	42	100	18
Peru	3,4 or 5 best years in last 5 years	50	80	4
Uruguay	3 last years	60-70	75	12
Venezuela	5 or 10 last years (plus fixed sum)	30	b	6

a Ranked on base of the strictest combination of the three norms of calculation.
b Because the law does not establish a maximum for ranking purposes it was assumed it is 100% .
c Finance, Teachers and Public Registrar.
d Judiciary, Communications.

Sources: 75.

only conditions are to be insured or have paid a few contributions, evaders frequently have access to costly health-care treatment by simply registering or paying a small sum, and thereafter stopping their contribution [80].

It should be also recalled that, in Latin America, the insured's dependents (spouse and children, but, in some countries, parents and siblings as well) are entitled to medico-hospital benefits. Some countries provide (at least until recent years) expensive benefits such as contact lenses and orthodontics, and the cost of travel and treatment abroad when the required health-care treatment is not available at home, e.g. in Ecuador, Peru, Costa Rica (until 1982) and Colombia (until 1986). In 1982 the cost of treating abroad 131 Peruvian insured was US$5 million or US$38,168 per capita [63, 72, 78, 83].

Finally some countries offer so-called "social benefits," to the insured and their dependents, such as personal and mortgage loans, low-cost or low-rental housing, special shops with subsidized prices, and free or heavily subsidized recreational and sport activities. These services are very expensive and usually deficitary.

2. Inequalities in Benefits

In the analysis of benefit inequalities we should distinguish two situations: the stratification typical of pioneer countries (where most of the population is insured, but with notable inequalities in the benefits received by various groups), and the even worse inequity in the less-developed countries where only a fraction of the population is insured and often entitled to generous benefits, while the bulk of the population is not covered at all and only has access to inferior services provided by the public health sector or social welfare.

The stratification of social insurance typical of the pioneer countries (at least until some of them unified and standardized their systems) led to considerable inequalities in the benefits, because the most powerful groups received (and in some instances still receive) more and better benefits than the least powerful. The study of five Latin American countries already mentioned (three pioneers -- Argentina, Chile and Uruguay -- and two in the intermediate group -- Mexico and Peru) measured, in the 1970s, the legal differences between the occupational groups covered based on six criteria: entitlement conditions; base salary used to compute benefits; amount of benefit; cost-of-living adjustment of pensions; possibility of obtaining several pensions or combining one pension with a paid job; and time required to request, process and receive the

Table 22

Real Value of Pensions in Selected Countries of LAC: 1975-1986
(1980=100)

Countries	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Barbados				108.9	103.1	100.0	125.8	120.3	111.7	88.8	98.5	99.0
Chile[b]	67.4	72.5	79.4	82.7	93.5	100.0						
Colombia[a]	96.8	91.0	102.6	106.4	84.5	100.0	91.9	93.3	92.4	89.9	89.3	
Costa Rica	76.2	87.2	95.8	94.0	101.2	100.0	88.6	88.9	82.0	101.2	102.1	
Cuba	110.4	108.3	104.7	100.4	100.0	100.0	89.5					
Ecuador	65.3	62.3	72.6	64.7	67.3	100.0	90.4	85.0	76.6	66.1	67.0	72.2
Jamaica	70.1	66.9	77.9	69.4	72.3	100.0	107.3	107.4	129.1	100.5	82.4	78.2
Mexico[c]	107.1	106.2	103.9	98.4	98.4	100.0	98.9					
Panama	102.2	106.6	107.0	108.5	106.3	100.0	105.9	105.8	119.6	124.0	126.4	
Peru	167.4	n.a.	n.a.	n.a.	n.a.	100.0	85.9	81.4				
Uruguay[d]	112.3	114.6	105.4	106.4	96.7	100.0	137.0	143.2	110.5	105.0	90.2	111.6

a The highest point was 116.7 in 1973
b Old system; the highest point was 138.0 in 1971
c The highest point was in 1975
d The highest point was 199.7 in 1963

Sources: 32, 63, 66, 71, 73, 81a, 83.

Table 23

Entitlement Conditions for Sickness-Maternity Benefits of Social Insurance in LAC: 1985

Countries	Monetary Benefits						Medico Hospital Benefits	
	Sickness			Maternity				
	Contribution weeks	% of Salary	Length (weeks)	Contribution weeks	% of Salary	Length (weeks)	Contribution weeks	Length (weeks)
Latin America								
Argentina	a	100	26	42	100	12	a	
Bolivia	9	75	26	17	75	12	$4^S,17^M$	26
Brazil	52	70-90	g	a	100	12	13	
Chile[d]	26	100		26	100	12	a	
Colombia	4	50-66.6	26-52	12	100	8	4	26-52
Costa Rica	4	50	26	26	50	8	$4^S,26^M$	52
Cuba	a	50-90		11	100	18	b	
Dominican Rep.	6	50	26	30	50	12	$1^S,15^M$	26
Ecuador	26	66-75	26	26	75	8	26	
El Salvador	8[e]	75	52	12	75	12	8[e]	26-52
Guatemala	a	66	26	a	100	11	a	
Honduras	5	50-66	26-52	11	66	12	a	
Mexico	6	60	52-78	30	100	12	a	52-104
Nicaragua	8	60	26-52	16	60	12	a	
Panama	26	70	26-52	39	100	14	a	26
Paraguay	6	50	26-52	6	50	9	a	26-52
Peru	13	100	49	39	100	13	13	52
Uruguay	13	70	52-104	a	100	12		
Venezuela	a	50-66.6	52	a	66.6	12	a	52
Non-Latin Caribbean								
Antigua-Barbuda	26	60		26	60	13	b	
Bahamas	40	60	26	50	60	13	b	
Barbados	13	66.6	26	30	100	12	b	
Belize	50	60	11	50	60	12		
Bermuda	h	h	h	h	h	h	c	
Dominica	13	60	26	26	60	12	b	
Grenada	a	60	26	30	60	12	b	
Guyana	50	60	26	15	60	13	b	
Jamaica	h	h	h	f	f	f	b	
St. Cristopher	26	60	26	39	60	13	b	
St. Lucia	a	60	26	30	60	13	b	
Trinidad-Tobago	10	66.6	52	10	60	13	b	

S=Sickness M=Maternity

a The only condition is to be insured or have a job at the time.
b Not supplied by social insurance but by the national health system or public health sector. Usually residency (or citizenship) is the only needed condition.
c Residents, with a waiting period of 39 weeks.
d Old system. In the new system the insured can freely select the provider; conditions and benefits are considerably different among providers.
e For the unemployed; there are no conditions for those employed.
f For domestic servants only.
g For all the necessary time.
h This benefit is not available.

Source: Author's compilation based on 130.

benefit. In addition, there was a comparison of the availability of health services (hospital beds and doctors per insured person) and their quality for the various groups. The results of the study showed that occupational groups ranked on the following order, from best to worst: (i) armed forces, (ii) civil servants, (iii) the "labor aristocracy", (iv) private white-collar employees, and (v) blue-collar workers [61].

a. Pensions

Table 24, based on data for the 1980s, compares three pioneer countries (Chile, Costa Rica and Uruguay) and three from the intermediate group (Bolivia, Colombia and Mexico). The table estimates the ratio of average pensions in several occupational groups to the average pension in the general system (1:00), as follows: armed forces 2.5 to 8 times higher; police 1.6 to 6.9; civil servants 1.2 to 3.8; banking 3.4 to 5.8; but rural workers 0.8 and domestic servants 0.7. Not included in the table is the Dominican Republic where, in 1987, the ratio of pensions of civil servants to the general system was 4 to 1 [39].

In Brazil, pension replacement of salary ranges from 80% to 95% among privileged groups, but 75% among rural workers. Furthermore, early retirement for old age is exclusively granted to privileged groups: 72% of the insured women and 55% of the insured men in those groups retire prior to 55 years of age, while the regular ages of retirement are 60 and 65 years, respectively. The average privileged pension triples the standard pension and pensioners receive 2.5 times what they contributed to the system. Because of this, 28% of total expenditures on urban pensions go to 9% of the pensioners who took advantage of early retirement [57, 58, 105].

Discrimination between civil servant's pensions and the rest of the pensioners is common in LAC. In Costa Rica, in spite of having one single general institute for the nation (CCSS), there are 19 independent pension programs (nine totally financed by the state) covering civil servants and offering benefits superior to those available in the general pension system. The civil servants' pension programs combined cover 16% of the insured population in all pension programs in the nation and have 20% of the pensioners, but spent about 42% of total national expenditures in pensions. The state subsidy to all pensions in the nation equalled 1.5 % of GDP in 1985 -- out of which 68% went to the privileged pension programs for civil servants [75]. Panama has 40 special laws for the public sector (e.g., national guard, banks, teachers, communications) which

Table 24

Inequalities Among Average Pensions of Various Insured Groups in Selected Countries of Latin America: 1980-1987[a]

	Bolivia (1987)	Chile (1980)	Colombia (1982)	Costa Rica (1986)	Mexico (1980)	Uruguay (1982)
General	1.0	1.0[b]	1.0	1.0	1.0[c]	1.0[d]
Armed Forces		8.0	2.5		5.5[e]	4.9
Police		6.9	1.6			4.1
Civil Servants	1.2	3.2	1.7		3.8	2.0
Teachers	1.3			3.4		2.0
Finance, Judiciary				5.8		
Banking		5.7	3.4			3.8
Oil	2.2					
Rural						0.8
Domestic Servants						0.7

a Ratio between the general system (1.0) and the rest.
b SSS (blue-collar fund) the biggest in Chile at the time.
c IMSS (general fund of the private sector) the biggest in Mexico.
d DIPAICO (industry and commerce fund) the biggest in Uruguay.
e 1971.

Source: 28, 66, 75, 83, 116.

grant 60 supplementary benefits to those available under the general system [43]. A study on Bahamas, Barbados and Jamaica shows that civil servants have pension programs well above the general system: (i) retirement from 5 to 10 years earlier; (ii) authorization to receive two pensions and, in addition (Jamaica) perform paid work; and (iii) exemption of contribution to the pension program or a percentage contribution lower than the rest of the insured [73]. It has been alleged that the privileged pensions of civil servants are justified as a compensation for the lower salary they receive compared with the private sector. But the opposite is true, at least in Costa Rica and Panama, where salaries in the public sector are actually higher than in the private sector [71, 75].

b. Sickness-Maternity

Table 25 compares, in the 1980s, inequalities of health services among four types of institutions (social insurance, ministry of health -MH, armed forces and private sector) that cover different population groups in four countries of the intermediate group (Colombia, Ecuador, Mexico and Peru). The findings are:
(i) in two countries the best services are those offered by the private sector and, in another country, they are second only to the armed forces; (ii) the armed forces have from three to four times better services than the MH; and (iii) social insurance provides better services than the MH, which has the worst services. With the exception of the private sector, the insured do not fully pay for the services received, hence there are transfers to the armed forces and social-insurance covered groups from the lowest income groups, which only had available the MH (worst) services [80].

Inequalities in health benefits are not limited to occupational groups but are found among geographical units also, Individual studies of ten Latin American countries (Argentina, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Panama, Peru and Uruguay), based on scattered 1979-1984 data (see Table 15), have measured extreme differences in hospital beds and physicians per population between the best and worst regions (states, departments, provinces). Those differences are positively correlated with the degree of population coverage already discussed (III.2.c.) and show that the least developed, poorest, isolated, rural regions (with the highest concentration of Indian population) have the worst services, while the most developed, wealthiest, urban regions (where the capital city is located) have the best services. Extreme

Table 25

Inequalities of Health-Care Facilities Among Providers
In Selected Countries of Latin America: Between 1980 and 1984

Sectors or Groups	Colombia (1984)	Ecuador (1983)	Mexico (1980)		Peru (1982)	
	Hospital beds[a]	Hospital beds[a]	Hospital beds[a]	Physicians[a]	Hospital beds[a]	Physicians[a]
Social Insurance	1.4	1.9	1.2-1.4[b]	11.8-24.9[b]	1.6	11.1
Ministry of Health	1.2	1.2	1.1	6.7	1.8	5.1
Armed Forces	n.a.	5.6	4.1	23.8	2.3	20.4
Private Sector	5.6	4.7	n.a	n.a	1.1	70.8

a Hospital beds per 1,000 covered in each institution; and physicians per 10,000 covered.
b IMSS, ISSSTE, Petroleum

Source: 80, 81a.

disparities were found in Peru for physicians (63:1) and in Mexico for hospital beds (8:1). Part of these inequalities are justified by the natural concentration of high-level health services in urban areas, but the disparities are too large and respond to political and economic factors as well [63, 66, 78, 80, 83].

A highly stratified health-care system (i.e., a high number of providers covering different population groups with diverse packages of benefits) appears to generate marked inequalities in those services and health status as well. Conversely, integrated health-care systems or those with a high degree of coordination tend to reduce such inequalities. Several countries in the non-Latin Caribbean have achieved exceptionally high health standards despite the fact they are not developed economies (see Table 26). Part of the explanation can be found in the small size of these countries but their national health care systems seem to have played an important role in that phenomenon.

Finally, there are inequalities related to the population age structure. In the pioneer countries the bulk of benefit expenditure goes to pensioners, part of whom continues to work. The majority of health-care expenditures is incurred by the population of productive age which faces a lower sickness risk than the materno-infant population. In 1985, 30% of the productive-age population was covered by social insurance in Peru but only 1.4% of the population below 14 years of age was protected; in Colombia the proportions were 15% and 3.6% respectively. In Brazil, 4.3% of the population, which is pensioner, receives 31% of total benefit expenditure [57, 70, 83, 110]. These three countries have infant mortality rates which respectively rank third, eighth and seventh highest among 24 LAC countries (Table 26). There are no data on this issue for the least developed countries (e.g., Bolivia, Honduras, El Salvador, Guatemala) but it is highly probable that their age-related inequalities are worse than in the more developed countries of the region. Infant mortality rates among the least developed countries are the highest within LAC hence contributing to the low life expectancy at time of birth in those countries. A better age distribution of social insurance expenditures could reduce infant mortality and raise life expectancy. For instance, the elimination of privileged seniority pensions or early retirement options would free those substantial resources to provide better health care to pregnant women and children.

Table 26

Health Facilities and Status in LAC: 1980-1985

Countries	Hospital beds x 1,000 inhab. (1980-1985)	Physicians x 10,000 inhab. (1980-1985)	Infant Mortality (1985)	Life Expectancy (1985)
Argentina	5.4	25.7	34	70
Bahamas	4.3	10.0	27[c]	69
Barbados	8.7	8.5	17[c]	72[c]
Bolivia	1.8	5.1	117	53
Brazil	4.2	7.8	67	65
Chile	3.5	9.7	20	69
Colombia	1.7	5.8	55	65
Costa Rica	3.3	10.0	18	74
Cuba	4.6	20.8	17	74
Dominican Republic	2.6[b]	4.1	70	64
Ecuador	1.7	8.8	50	64
El Salvador	1.2	3.2	65	64
Guatemala	1.6	4.1	65	60
Haiti	0.9[a]	1.2	123	54
Honduras	1.3	4.0	76	62
Jamaica	2.8	3.4	27[c]	71
Mexico	1.2	9.0	39[c]	67
Nicaragua	1.6	6.7	69	59
Panama	3.2	10.3	25	72
Paraguay	1.0	6.2	43	66
Peru	1.7	8.7	95	60[c]
Trinidad-Tobago	4.5[b]	7.4	22	69
Uruguay	6.0	19.9	30[c]	72
Venezuela	2.7	12.0	37	70

a Only in the Ministry of Health
b 1975
c 1984

Source: 80.

3. The Effects of the Benefit Structure

Generous and lopsided social insurance/security benefits in LAC have had a perverse demonstration effect, contributed to escalating costs, impeded universalization of coverage, provoked actuarial and financial disequilibria, and eventually led to the erosion of real pensions and the deterioration in the quality of health care. (Privileged benefits only partly financed by the insured have also had a regressive impact on income distribution, an issue to be discussed in Section VI.)

In pioneer countries, the privileged programs covering the most powerful pressure groups were at the beginning easy to finance through subsidies (directly paid by the state, special taxes, and/or price increases), because the size of those groups was relatively small and the state was capable of transferring part of the financing to other groups. These programs, however, served as models which were eventually imitated by larger, but less privileged groups. Increasing trade unionism, combined with state intervention (to co-opt some groups) and concessions by political parties competing for electoral votes played a key role in the so-called "massification of privilege" (i.e., gradual expansion of some generous benefits and entitlement conditions to an increasing number of insured). But what was financially viable for a minority of insured (although unjustifiable under an equity viewpoint) could not work in the long run for the mass of insured [61].

We have seen that social insurance/security expenditure as a percentage of GDP steadily rose in 1965-1983 in most LAC countries. A major cause in the escalation of costs has been the generosity of benefits, e.g., frozen or reduced ages for retirement in the face of increasing life expectancy, seniority pensions, retirement ages for women lower than for men, high percentages of salary replacement in both pensions and sickness-maternity leaves, adjustment of pensions above inflation, "luxury" health benefits such as contact lenses and orthodontics as well as travel and treatment abroad. Also contributing to a growing benefit expenditures in LAC is the social insurance bias for curative capital intensive medicine over the less expensive and more effective preventive medicine or primary health care. Emphasis is put on big hospitals over ambulatories, on complex expensive equipment and drugs over vaccination and health education, on specialized physicians over paramedic personnel. Duplication of costly equipment and over-prescription of drugs also contribute to increasing health costs. Finally, as pensioners live longer they are entitled to health care for diseases which

are more and more expensive to treat and are eventually incurable [18, 42, 56, 64, 80].

In countries in the low and intermediate groups, the enormous cost of the vertical extension of benefits for a minority of insured often makes impossible the horizontal extension (universalization) of essential benefits, such as minimum pensions and primary health care, to the majority of the population.

As the pension program has matured in LAC, first in the pioneer countries, and subsequently in the intermediate group, the percentage of social insurance/security expenditures going to that program has increased. In 1983 it approximated, as a regional average, half of total expenditures and 70% in the pioneer countries. In addition, in a couple of countries of the intermediate group, the phenomenon of "precocious maturity" of the pension program has occurred because of prolonged stagnation in population coverage (e.g., in Ecuador, the percentage of expenditures on pensions reached 76% in 1983). With more resources going to pensions, less have become available for the sickness-maternity program. This situation has been aggravated by the custom of investing a sizable part of pension funds in the construction and equipment of hospitals and even in subsidizing operation costs. We have seen that, normally, such investment is not profitable and hence has contributed to the de-capitalization of the pension fund. The latter combined with the maturation of the pension program has resulted in double financial disequilibria or bankruptcy (in the pension and sickness-maternity programs) in several countries. The economic crisis of the 1980s has precipitated the same phenomena in some countries of the intermediate and low groups such as Colombia, Ecuador, Panama, Peru and the Dominican Republic. Other countries are edging to the crisis in the short or medium term, such as Bolivia, Costa Rica, Jamaica and Mexico.

Facing bankruptcy, a few countries have been able to eliminate or reduce generous benefits and entitlement conditions through emergency plans or deeper reforms. However, in many other countries, political factors have impeded such an action and/or the state has had to increase its subsidies (something difficult in the midst of the crisis) or real pensions have eroded and the quality of health deteriorated. Recent attempts to eliminate privileged pensions and/or tighten the entitlement conditions have not been successful (see VIII, 1).

4. Recommendations on Policy and Research

To reduce the cost of benefits and increase their equity, the following measures are suggested: (i) eliminate seniority and early retirement; if this is not politically feasible, then raise the years of work required and fix a minimum age for retirement and increase the percentage of salary replacement according to the years of work served; (ii) augment the age of retirement adjusting it to current life expectancy; if this is not possible, then gradually raise the percentage of salary replacement according to increasing ages of retirement, in order to encourage retirement at a higher age than the standard set in the legislation; (iii) make equal the ages of retirement of men and women raising the latter instead of reducing the former; (iv) relate pensions more closely to the insured life revenues by increasing the number of years that are used to calculate the base salary; (v) reduce the percentage of salary replacement or increase such percentage according to years of age/work to discourage early retirement; (vi) consider the introduction of a dual system of pensions, one providing basic benefits (within a minimum and a maximum) and another giving the option of complementary pensions mainly financed by the insured, with full capitalization and a strict relationship between contributors and pensions; (vii) adjust monetary benefits on base of salary increases instead of cost-of-living increases; if this is not feasible and benefits are indexed to inflation, then the base revenue for contributions should be indexed too; (viii) limit the number of dependent family members eligible for survivors' pensions to the spouse and minor children; (ix) standardize entitlement conditions and the calculation of benefits, particularly pensions, to eliminate both unequal conditions enjoyed by privileged groups and state subsidies; (x) reduce the percentage of salary replacement for sickness leave and establish a minimum waiting period to avoid simulation of sickness; (xi) abolish excessively generous sickness benefits as well as travel and treatment abroad; (xii) develop a more balanced, reasonable distribution of health resources and services among population sectors, geographical units and age groups; (xiii) give more emphasis to primary health care vis-a-vis curative medicine; (xiv) eliminate or reduce to a minimum the so-called "social benefits"; and (xv) use the resources saved through the previous measures to extend population coverage, provide basic benefits to low income groups, and promote a more equitable balance of benefits.

The following research topics should be given priority: (i) compare the generosity of benefits and

entitlement conditions in LAC and industrialized countries; (ii) estimate, in a sample of representative countries, the percentage of benefit costs (particularly of privileged benefits) paid by the insured and the percentage subsidized by the rest of the population (current and future generations); (iii) conduct simulation exercises to estimate both the amount of savings generated by the elimination/reduction of generous benefits, and how much of the priority goals such savings would finance (e.g., extension of population coverage, with basic benefits, to lower income groups); (iv) evaluate the effectiveness of processes of unification-standardization of social insurance and integration-coordination of health services (from social insurance and MH) and their impact upon reduction of benefit inequalities; and (v) study the experience of countries which have been successful in eliminating/reducing privileged or excessively generous benefits and how those countries were able to accomplish such a task; in addition, study the experience of countries that failed in such an attempt and the causes and consequences of that failure.

V. ADMINISTRATION

1. High Administrative Costs

As in many other aspects of social insurance/security in LAC, statistics on administrative costs are usually deficient and difficult to compare among countries. The scarce data available, however, indicate that such costs are much higher in LAC than in the developed countries of North America, Europe and Asia, where they vary between 2% and 4% of total expenditures [93].

According to the first column of Table 27, in 1983-86, the LAC percentages of administrative expenditure over total expenditures ranged as follows: 3% to 5.9% in Argentina, Barbados, Costa Rica and Uruguay; 6% to 8.9% in Brazil, Panama and Chile; 9% to 11.9% in Peru, Colombia and Guatemala; 12% to 14.9% in Jamaica, Mexico (ISSSTE), El Salvador and Bolivia; 15% to 17.9% in Mexico (IMSS), Venezuela and Honduras; 19% to 22.9% in Bahamas, Dominican Republic and Ecuador; and 23% to 32% in Nicaragua and Trinidad-Tobago. With very few exceptions, these percentages increased in 1977-1980 but, in 1980-1983, increased in only half of the countries and were stagnant or declined in the other half [59, 68, 93].

In those countries where social insurance was introduced recently (as in non-Latin Caribbean), a high

Table 27

Indicators of Administrative Inefficiency of Social Insurance
in LAC: 1983-1987

Countries[b]	% of Administrative Expenditures Over Total Expenditures	Employees per 1,000 Insured
Argentina	3.4	n.a.
Bahamas	21.8	3.8
Barbados	5.0	2.4
Bolivia	14.5	6.7
Brazil	6.8	n.a.
Chile	8.2	n.a.
Colombia	11.6	7.4
Costa Rica	5.0	13.0
Dominican Republic	22.0[f]	20.5
Ecuador	22.5	13.2
El Salvador	13.7	13.5
Guatemala	11.8	7.4
Honduras	17.8	n.a.
Jamaica	12.8	0.6
Mexico	12.8-17.3[c]	8.9-10.4[c]
Nicaragua	28.0	4.5
Panama	7.7	11.7
Peru	11.4	7.0/10.5[e]
Trinidad-Tobago	32.4[d]	n.a.
Uruguay	5.4	n.a.
Venezuela	17.6	4.1

a Includes family allowances or programs for civil servants in seven countries.
b There are no data for Cuba, Haiti and Paraguay. In most countries coverage by social insurance only; other countries include family allowances and/or pensions for civil servants and/or non-contributory pensions.
c In the biggest two funds (IMSS and ISSSTE).
d 8.7% if all programs (including social welfare) are taken into account.
e The lowest is the official figure and the highest is the figure, adjusted in 1988, to correct overestimation of population coverage.
f 41% in 1988.

Sources: 39, 73, 80, 93, 116.

percentage of administrative expenditures can be partly explained by the need of minimum personnel, equipment and physical plant to operate the system, combined with low initial benefit expenditures (particularly on pensions): as the latter increase, the proportional cost of operation is greatly reduced. However, Table 27 shows divergent percentages among the four non-Latin Caribbean countries and such variety cannot be solely explained by the length of time the program has been in operation but by either administrative frugality (e.g., 5% in Barbados) or prodigality (e.g., 22% in Bahamas).

In countries where there is a multiplicity of institutions and /or low population coverage, the percentage of administrative expenditure tend to be higher (e.g., Dominican Republic, Ecuador, Honduras, Bolivia, Colombia) than in countries with universal coverage that either began relatively unified or later on undertook processes of unification and standardization (e.g., Argentina, Brazil, Costa Rica, Uruguay and Panama). Usually, administrative expenditures of privileged institutions are higher than those of the general institution, thus, in Bolivia, the petroleum institute spends six times per insured the amount spent by the CNSS [116]. In some countries the law fixes a percentage for administrative costs but this norm, rather than restraining those expenditures, often becomes an incentive to spend up to the maximum allowable [126].

Economies of scale may reduce costs thus explaining the lower administrative expenditures in industrialized countries (as well as in LAC countries with the largest and unified programs. However, Denmark, Ireland and Norway are small industrialized countries but have lower percentages of administrative expenditures than in LAC (except for Costa Rica) [50]. The major administrative problems faced by social insurance/security in LAC, as well as their causes, are analyzed in the following sections.

2. Excessive and Relatively High Remunerated Personnel

Personnel takes the bulk of expenditures within administrative costs, and its importance in 15 LAC countries is measured in the second column of Table 27 through the ratio of one employee per 1,000 insured. These types of figures are estimated neither by social insurance/security institutions nor by international organizations. In some countries, the percentages are underestimated because personnel data exclude temporary employees which could account for a sizable percentage of the total number of employees. In addition, because population coverage data are often overestimated, the ratio of employees per 1,000 insured

is underestimated. For instance, Peru's ratio of 8.1 per 1,000 in 1984 fell dramatically to 5.8 in 1985, but this was largely due to the increase in "legal coverage" of more than one million dependents, few of whom were actually covered. In 1988, the ratio (based on official figures of coverage) was 7.0 but, when adjustments were made to eliminate two million who were not actually insured, the ratio increased to 10.5 and established a historical record [78].

The enormous bureaucracies of the Dominican Republic, El Salvador and Ecuador are revealed by ratios of 13.2 to 20.5. But notice that Costa Rica and Panama have ratios of 13 and 11.7, respectively, and relatively low percentages of administrative expenditures. The ratios of Bahamas, Barbados and Jamaica are the lowest in the region; Bahamas has the higher ratio of the three countries, thus accounting for its higher administrative costs [73].

High salaries and fringe benefits of the personnel account for from one-half to three-fourths of administrative costs in several LAC countries. Social insurance employees are often the best paid in the public sector (their salaries are often indexed to inflation) and enjoy labor conditions far superior than those of the insured. In Peru, a collective agreement, signed in 1986, granted quarterly automatic adjustment of IPSS salaries to cost of living (far superior than the general salary adjustment); such indexation was enforced until mid 1988, significantly contributing to the grave financial crisis of the IPSS [78]. Fringe benefits often include travel and housing allowances, fellowships to study abroad, shops for consumer goods at subsidized prices, vacation centers, personal loans and social insurance benefits more generous than those in the general system. In some countries the employees do not pay any contributions since these are financed out of general social insurance revenue.

In many LAC countries, social insurance/security institutions have become a major source of employment to alleviate high open unemployment. In some cases, the employees do not actually work, but collect their salaries or do show up but waste their time, come in late, leave early and are frequently absent. Employee strikes are frequent (including physicians) to extract additional concessions from the administration. Turnover among the top personnel is common: in Colombia in 1982-1986, the directors of the two major social insurance institutions changed three times and the minister of health four times; in Peru in 1985-1988, the

director of IPSS changed four times (one per year). Each new director brings his own team which means replacement of most executive personnel who never have enough time to learn and apply policies. [78, 83].

Stabilization programs introduced in the 1980s have targeted the bureaucracy in some countries (e.g., Argentina, Colombia, Costa Rica, Peru). "Emergency plans" have frozen employment and promoted early retirement (e.g., in Colombia, the ratio was reduced from 10.9 to 7.4 in 1975-1985 and, in Argentina, 36% of the employees were dismissed between 1980 and 1986) [60, 72, 83]. Political and social pressures, however, are very strong and trimming the leafy bureaucracy is a formidable task.

3. Multiplicity of Institutions and Legal Complexity

Part of the high administrative cost is due to multiple institutions. The pioneer-country systems evolved in a fragmented manner, thus creating a mosaic of multiple institutions in charge of specific programs and covering diverse occupational groups. In Argentina, Brazil, Chile, Cuba and Uruguay, there were as many as sixty social insurance institutions. Each had its own legislation, financing sources, benefits and entitlement conditions; differences among institutions were significant and the system lacked overall coordination. The "stratified" systems induced negative effects: juridical confusion, administrative complexity, high costs of operation, difficulty to establish a single registry and adequate control of evasion, obstacles for the insured to combine time of working and contributions credited in different funds, and irritating inequalities [61].

In countries where social insurance/security was introduced later, stratification was less of a problem since one general institute incorporated most programs and insured groups. However, in Colombia, there are 300 institutions with programs for pensions, sickness-maternity and family allowances; in Bolivia there are 12 major funds, 20 complementary funds and five health programs [83, 116]. In the last three decades, the majority of the stratified systems (e.g., Argentina, Brazil, Chile, Cuba, Peru, Uruguay) have benefitted from a process of total or partial unification of institutions and legal standardization [61]. Stratification still remains unabated in several countries, while in others the unification process has to be completed, e.g., there are still hundreds of "obras sociales" -- social insurance health programs -- in Argentina [40].

The Latin American countries inherited the Iberian tradition of abundant legislation characterized by detailed regulation, which requires frequent amendments. This legalistic approach, combined with multiple

institutions, induced a legal labyrinth which even codification of social security legislation has not been able to simplify in some countries. Even worse, unified-standardized systems of recent creation have developed an abundant and complex set of laws and regulations. For instance, the law which in 1981 introduced the new pension system in Chile had been modified 15 times by 1987 and, in addition, there were 400 administrative regulations. Such complexity requires highly specialized lawyers who charge juicy honoraria for their services to enterprises and insured [74]. Last but not least, the granting of benefits is usually conducted as a judicial litigation where the insured ought to prove his rights through documentation, witnesses and so forth (this is due in part to the lack of systematized information such as individual accounts). This process provokes long delays and increases administrative costs.

4. Information and Accounting Deficiencies

Through this study numerous examples of information vacua and deficiencies have been reported, e.g., on population coverage, evasion and payment delays, investment yields, state debt, administrative costs, etc. On the other hand, some of the statistics annually compiled and published by social insurance institutions do not have a specific purpose and clear utility. Various regional and international meetings and symposia on social insurance/security statistics have been held in the last two decades, but in spite of some improvement, major problems still remain in this area. Furthermore, the 1980s economic crisis hampered the collection and/or publication of statistics; for example, some countries have either stopped publishing statistical yearbooks and annual reports or are two or three years behind schedule, or data have been reduced by one-half (and not necessarily leaving out the least important statistics).

There is a universal trend in LAC towards the use of computers in social insurance/security administration, either through ownership or rental of equipment. Computerization is normally seen as a panacea for multiple problems such as evasion, payment delays and processing of benefits. These trends are present even among newcomers. Hence, in 1987, all three non-Latin Caribbean countries discussed herein were introducing computer techniques. Although this move is positive there are problems. For instance, lack of skilled personnel and software often results in serious underutilization of computing equipment [73]. In Ecuador in 1984, costly rented equipment was used once a month by the budget department, but calculations were

normally done manually and then entered into the computer only for printing purposes [63]. Computerization is not enough to solve problems which require follow-up actions, for example, up-to-date records on employee payments should be followed by dynamic enforcement of collection among those who are delinquent. In Colombia, data stored on magnetic tapes have gradually deteriorated, and in many cases processing of pensions has to be done manually [83].

Financing data is often divided among several departments -- accounting, actuarial, budget, investment, treasury -- and either lack integration or are plagued with errors and contradictions (the latter are a major headache for researchers and consultants). Budgets are commonly constructed by program (e.g., pensions, sickness-maternity) rather than by function or budget category, and integration is, again, difficult or impossible. This is compounded by obscure transfers within programs. In other cases, data are not disaggregated, hence it is not possible to evaluate the financial status of each program. In some countries, accounts do not provide the needed basis for establishing the links between contributions and benefit payments within one program. In a few countries, there has been no accounting records for relatively long periods, e.g., in Peru for 1968-1978. There are no historical series on investment's real yields, overall and by instrument, hence evaluation of investment efficiency (and policy formulation) is a hard task. The already mentioned lack of individual accounts provoke long delays in the granting of pensions, as much as several years. In some countries, external consultants have been hired to study accounting problems and formulated recommendations which have been ignored by an incoming administration which then has hired new consultants to study the same problems [63, 69, 70, 73, 75, 78, 83].

5. Inefficiencies in Health-Care Management

It has been discussed already (section II) that the excessive emphasis on high cost curative medicine (particularly of social insurance institutions) over low-cost preventive medicine is an inefficient way to allocate health-care resources in LAC. In the early 1980s, the ratio of resources allocated to curative vis-a-vis preventive medicine was 6 to 1 in Brazil and 9 to 1 in Mexico. In Brazil, in 1949, 13% of public health expenditures were in curative medicine and 87% in preventive medicine but, in 1982, the proportions had reversed : 85% and 15% respectively [57]. A more balanced allocation of resources could reduce morbidity

and mortality, as well as the need for curative care.

Another type of inefficiency is found in the lack of integration, or at least coordination, among the various providers of health services -- especially the ministry of health and social insurance -- which promotes duplication in physical plant and costly equipment, as well as low percentages of hospital occupancy. For instance in Sucre, Bolivia, in 1986, the social insurance hospital had an occupation of 30% and, close to it, there was a railroad hospital with 15% of occupation [116]. Primary and secondary level services are often not adequately staffed and supplied; hence the users, particularly of outpatient consultation, skip these levels and go directly to tertiary (specialized) hospitals provoking jams and depleting resources from more complex services. Once again a more rational allocation of resources (i.e., investing more at the primary level) could resolve or ameliorate these problems [19, 26, 42, 48, 55, 80, 96-100].

Table 28 compares national averages of hospital occupancy and days of stay among eleven Latin American countries. Although figures are rough and not always comparable (e.g., they deal with different institutions), they show that hospital occupancy was 60% or below in three countries, below 70% in five, and above 80% in only three. Furthermore, with the exception of Costa Rica, those countries with the highest occupancy have an abnormally high average of days of stay. If the latter would be reduced, the percentage of occupancy would decline as well. For instance, the occupancy percentage in Montevideo (81.8%) would have declined to 41% if the average days of stay would have been cut from 13.3 to 6.6; in addition, outside of the capital city, the occupancy averaged 51.2% with a still high average days of stay: 7.9. It is true that tertiary-level hospitals are concentrated in the capital city, and because part of the users travel long distances, they need more days at the hospital for diagnosis and post-surgery care, but still the average days of stay are too high by international standards [80, 111].

National averages presented in Table 26 hide extreme divergences among regions and individual hospitals. For instance, Ecuador's national average of occupancy was 58%, but in seven out of twenty provinces it was below 40%; and Peru's national average was 70%, but in three out of eight regions it was below 50%. The low population coverage in these two countries make these inefficiencies even more serious. Low occupancy is usually the result of either excessive hospital capacity (often there are two hospitals -- the ministry's and

Table 28

Indicators of Hospital Efficiency in Selected Latin American Countries: 1979 to 1985

Countries	Sector	National Averages of	
		% of Hospital Occupancy	Days of Stay
Argentina (1980)	Public	60.6	7.5-26.9[e]
Chile (1985)	Both	75.3	8.5
Colombia[a] (1984)	Public	56.2	5.4
Costa Rica (1985)	Insurance	81.0	6.3
Cuba (1980)	Public	81.0	9.6
Dominican Republic (1985)	Insurance	51.7	10.4
Ecuador[b] (1979)	Both	58.0	8.2
Mexico[c] (1982)	Insurance	67.0	4.6
Panama (1984)	Both	67.0	7.0
Peru (1985)	Insurance	70.4	11.7
Uruguay[d] (1984)	Public	81.8	13.3

a The social insurance sector had averages of 61% and 7.3.
b Within social insurance, in 1981, averages were 82.7% and 9.3.
c IMSS; the ISSSTE averages were 70% and 5.7.
d Montevideo (excludes chronic patients); outside of Montevideo the averages were 51.2% and 7.9.
e Extreme variation among provinces.

Sources: 80

social insurance's -- in the same location) or poor quality of the hospital, or cultural barriers that impede proper use. Better integration, planning, allocation of resources and education could overcome most of these problems [63, 78, 80].

Finally, in some countries that have the indirect system of health care, contracts with private institutions lack proper control and have led to higher costs in services due to unnecessarily prolonging the hospital stay, prescribing surgery or laboratory tests, overprescription of medicines, and charging for services which were not actually delivered. These flaws have been studied in Brazil and Peru [54-57, 70, 107-109].

6. Recommendations on Policy and Research

To improve the management of social insurance/security and reduce its administrative costs it is recommended: (i) refine and standardize statistics on administrative expenditures and personnel; (ii) dismiss unneeded and incompetent employees; if this action is not politically feasible, then freeze all existing positions and gradually eliminate them as current personnel retires or shifts jobs; (iii) abolish or tighten privileged labor conditions enjoyed by employees; (iv) unify and standardize those systems with multiple institutions (e.g., Bolivia, Colombia) and complete those processes where they were interrupted or partly applied; (v) integrate or effectively coordinate the medico-hospitalization services of the ministry of health and social insurance; (vi) merge and simplify social security legislation; (vii) expedite the process of granting benefits (particularly pensions) through juridical simplification and the creation of individual accounts; (viii) evaluate statistical gathering and dissemination to eliminate the unnecessary and give priority to the useful data; (ix) combine computerization with execution action and train computer personnel to maximize equipment use; (x) integrate all financial statistics produced in various departments, elaborate budgets by function, establish the relationship between revenue and expenditure in each program, and develop series on investment real yields, overall and by instrument; (xi) promote a more rational allocation of resources between preventive and curative medicine, as well as among primary, secondary and tertiary levels of health care; (xii) evaluate and reduce (when feasible) average days of hospital stay, and study the reasons behind low occupancy to propose adequate policies; and (xiii) supervise service contracts with private institutions to avoid overutilization of surgery, laboratory tests and medicines.

The following research topics should be given priority: (i) study employment, its need and efficiency, as well as successful policies of job reduction; (ii) update the available information on unification and standardization processes of social insurance in LAC and evaluate their effects on costs and efficiency; (iii) analyze statistical production and set priorities based on the utility of data; (iv) evaluate, in a comparative manner, computerization processes in several LAC countries; (v) examine hospital efficiency and causes of its diverse performance among countries, as well as among regions and hospitals within one country; and (vi) study the impact of integration of health-care services on the efficiency, quality and extension of such services.

VI. THE EFFECT OF SOCIAL SECURITY ON DEVELOPMENT

This section analyzes the effects of LAC social insurance/security in three aspects of development: living conditions, savings and investments, distribution and employment. (Other aspects affected by social insurance/security, such as labor productivity and competitiveness of exports, are not included herein due to total lack of information). Neither the theory nor the available empirical studies are conclusive on these aspects, and their analysis in LAC becomes more difficult due to either the absence or unreliability of basic data on: functional distribution of income between labor and capital; incidence of social security contributions and taxes; adequate measurement of benefits (especially health-care); and diverse effects of behavior of employers and insured [89]. Nevertheless, this section summarizes the state of the theoretical discussion and empirical studies done in LAC.

1. Living Conditions

Social insurance employment-injury program should have had a beneficial impact on improving labor safety and maintaining the insured's (and their dependents) income after an accident or occupational disease. Disability and survivor pensions should have a similar positive effect concerning non-occupational risks. Old-age pensions must provide income for workers and their dependents after retirement. Without these programs, the number of people in extreme poverty conditions in LAC would be much higher than it is today. And yet, quantitative analysis of these aspects has not been conducted in the region.

The impact of sickness-maternity insurance on health status is even more difficult to evaluate. In theory,

Table 29

Health Status by World Region: 1980

	Industrialized Countries	Europe	Developing Countries			Total
			LAC	Asia, Pacific Middle East	Africa	
Mortality Rates						
General	9.5	10.1	8.7	10.2	17.7	10.7
Infant	15.8	25.1	66.2	80.7	121.1	66.7
Life Expectancy						
Men	68.9	67.1	59.7	55.8	44.4	58.4
Women	76.6	73.4	63.8	57.5	46.6	61.9
Composite Index	1.0	0.8	0.2	-0.2	-1.5	0.0
Number of Countries	22	7	34	24	38	125

Method: Factor analysis, based on regional averages weighted by population. The World Bank classification by regions was used.

Sources: Author's calculations based on 91.

about 60% of the Latin American population is covered and this must have helped to increase life expectancy and probably reduce infant mortality. However, it is not easy to separate this variable from others such as public health care, education, nutrition, income, etc.; and no cross country analyses have been done in LAC so far. These issues hence clamor for research [80, 123, 124].

Nevertheless, it is assumed here that the sickness-maternity program has had a positive impact in reducing infant mortality and increasing life expectancy. Table 29 shows that LAC health levels are the highest in the developing world: in 1980 the regional average of infant mortality was 66 per 1,000, life expectancy was 64 years among females and 60 years among males. These averages were considerably better than those of Africa, Asia and the Middle East and above world averages. Only the averages of industrialized countries and those of European countries at a middle state of development superseded those of LAC. The fact that LAC countries are at an intermediate level of development (ahead of other developing areas of the world) helps to explain the former lead, and social security programs should have played a positive role in that outcome. But variations among health standards among LAC countries are substantial, as we noted in Table 26.

2. Savings and Investment

The impact of social insurance/security on savings/investment depends on the surplus or reserves accumulated and the reaction that such a surplus can generate on other sources of domestic savings (private and public sectors) and external savings [2]. The surplus/deficit is a result of factors endogenous to the social insurance/security system (e.g., types of programs, financing methods, degree of maturity, administrative costs) as well as exogenous factors (e.g., age structure of the population, rate of salary increase, overall economic situation). Short-term risk programs normally use a pure assessment method and are more likely to generate a deficit than a surplus, whereas the long-range programs that use the capitalization methods usually generate large reserves for potential investment. As noted, however, there is a general tendency in the region to replace capitalization with pure assessment methods, and the region has a poor record in terms of efficiency in the investment of reserve funds.

The impact of social security on investment also depends on the sources of financing and the incidence of the contributions. A study by the Inter-American Development Bank considers that the investment rate

diminishes more when social insurance/security is really financed by the employer than it does when it is paid for by the insured or the consumer [7]. The maturity of the pension program depends on, among other factors, its age, the retirement age for pensions and the age structure of the population. Thus the older the program, the lower the retirement age, the older the population, the higher the passive/active ratio and the lower the surplus, and vice versa. A young population tends to grow rapidly, expanding the labor force and, if the system's coverage grows, its revenues also rise. On the contrary, in an aging population, the potential number of contributors declines and the number of pensioners rises. If real salaries are rising, the contribution base for social security also expands. A severe recession that reduces both employment and real salaries tends to have a negative impact on social insurance revenues and to lower the surplus.

The traditional point of view is that social insurance/security reduces both individual savings and the demand for private insurance, since the insured counts on his contribution being returned in the form of pensions and, as a result, is not inclined to accumulate a surplus during his active life. On the other hand, earlier retirement lengthens the retirement period and this can motivate savings during the active period of life. The planning horizon of the insured and his perception of social security contributions (as a simple tax or payment for future benefits guaranteed by a sound actuarial system) influences his behavior in terms of savings and preference for a particular type of social security program (e.g., short or long term). In the developed countries, with older populations and more solvent social security systems, the horizon seems further off than in Latin America where, due to a young population and financial disequilibrium of social insurance and hyperinflation, relatively more importance is given to short-range programs such as health care and family allowances [2, 88]. Social insurance/security and government compete for the same tributary base and it is assumed by some scholars that there is always a trade off among them. But if private savings are insufficient and the state establishes a minimum income level, social insurance can eliminate state social welfare payments and reduce the public deficit. Social insurance can raise the cost of exports making them less competitive (with those countries without social insurance or with a lighter burden) and thus may reduce potential external savings.

The research and debate on these themes, conducted primarily in the United States and other developed

nations, have produced contradictory results: a study of 16 OECD countries found no evidence that social security reduces private savings or slows development. In developed countries, statistics are more precise and social security coverage is universal, but this is not the case in most of Latin America, therefore making the analysis more difficult. Even within one country different interpretations exist: one study done in Chile found that social insurance had a negative effect on savings; whereas a later study concluded that, after the necessary adjustment, social insurance had generated a surplus (although decreasing) instead of negative savings [2, 66].

3. Income Distribution and Employment

In this section we will briefly review the impact of social insurance/security coverage, financing and benefits on income distribution as well as the effect of employer's contributions on employment.

In general it can be said that the most universal systems have less regressive effect than those with low population coverage. But, as we have seen, with very few exceptions, the people below the critical poverty line are not covered by social insurance even in LAC's most developed countries.

Financing can also be a cause of regressivity. In many countries there is a ceiling on the insured's salary contribution such that, proportionally, those earning more pay less. It should be recalled that more than two-thirds of the legal contribution is imposed on the state and the employer. No consensus exists on the incidence of these contributions; the following is a summary of the state of the research and debate.

The state's contribution is often made through a specific tax placed on the services or goods produced by the covered group, but paid by the entire population. Thus, when social insurance coverage is very low, the effect of this tax is probably regressive, as those who are not covered (who also have lower income) contribute to the system without receiving anything in return. In other cases, the state pays its contribution out of genera public revenues; if the bulk of these come from sales taxes which do not discriminate between essential and luxury consumer goods, it should also have a regressive effect when coverage is low. On the other hand, if state subsidies on basic goods and services exist and/or the bulk of the sales tax is on nonessential or luxury goods, the impact should probably be neutral since the covered group is largely the same group affected by the tax. But even in this case, the group not covered -- which has the lowest income and does not benefit from social security -- would be contributing to the system (e.g., through buying of manufactures) or the possibility

that such group could buy taxed goods or services would become more remote. It should be added that, in stratified social security systems, the state usually pays a higher contribution (or honors its obligations) to the groups with relatively higher income while paying a lower contribution (or not paying it) to the lower income groups. For instance, the state covers growing deficits of the special schemes of civil servants and armed forces but delays its payments or reduce its contributions to the general system which covers the mass of the labor force [66, 89].

The employer's contribution could, in practice, be paid by the employer, or transferred "backwards" (i.e., paid by the insured through a reduction in his real salary), or transferred "forwards" (i.e., paid by the consumer through higher prices). If the insured actually pays the employer's contribution there should not be any effect on employment or distribution (assuming the contribution is standardized). Conversely, if the employees pay the contribution, they would try in the future to substitute capital for labor hence reducing labor demand and employment. Finally, if the employers transfer the contribution to the consumers, the negative effect on employment would be nil or smaller but the impact on distribution regressive, particularly in those countries with low population coverage because the noncovered (lower income) group would contribute to the system but receive no benefit from it. There is no theoretical consensus on who really pays, since the empirical evidence is contradictory and mainly based on data from developed countries.

In the more developed countries of LAC, a backward transfer does not seem to occur in the short run (or at least this effect is reduced) due to institutional and economic barriers and different behavioral patterns. First, labor and social security legislation is much stronger. For instance, in some countries, the employer must pay the insured's contribution when his salary is equal to the minimum salary (Mexico) or pay the difference with the minimum contribution when the insured's salary is lower than such contribution (Peru); this substantially augments the cost of labor for this group. Second, in various of these countries (e.g., Chile at least up until the middle of the 1970s) the price fixing method most frequently used was average cost plus a profit margin, which facilitated a forward transfer. Third, in countries with protectionist measures for consumer-good industries, price increases are also facilitated. Fourth, workers do not seem to perceive the employer's contribution as part of their salaries. Indications of this are: union pressure on the state to assign

a higher contribution to the employer than to the insured; and collective negotiation does not include those aspects as they are already fixed by law. Fifth, the law and the unions make dismissals for economic reasons very difficult and the legal procedure is both lengthy and costly; the employer can, obviously, avoid contracting additional labor. All of this suggests that the transfer to the consumer -- at least in the short run -- is the most normal one in these countries and it is facilitated by oligopolistic structures [132].

Another point of view emphasizes the differences between the formal sector (totally or partially covered by social insurance) and the informal sector (not covered) -- differences that are more marked in the less developed LAC countries. In this case, it is assumed that the employer's contribution is not transferred (either forwards or backwards) and thus the effect would be reduction or stagnation in the demand for labor in the formal sector. Under this approach, social insurance (sometimes combined with a policy of incentives for capital) increases the relative cost of the labor factor vs. the capital factor, stimulating a substitution of capital for labor. This distortion unleashes a chain reaction: the formal sector absorbs fewer workers, fewer workers move from the informal to the formal sector, the growing labor surplus has a depressing effect on the salaries of the informal sector, salary differentials expand between both sectors and, with less capital available to the noncovered sector, its productivity and growth fall vis-a-vis those of the covered sector [44]. A change from wage contributions to a neutral financing system (or nondiscriminatory between factors such as the value-added tax - VAT) could correct this problem.

Two countries that experimented with VAT are Argentina and Uruguay; unfortunately, the effects of such substitution has not been seriously evaluated and Argentina has now reverted to the wage tax [7, 66]. It has been noted that the VAT has the advantage that it does not create incentives for the employer to report a smaller number of employees or lower salaries than in reality, but it has the disadvantage of a more complex administration [50, 121].

Generally benefits seem to have a more progressive impact on distribution than do contributions, but this depends in large measure on the extension of coverage, legislative standardization and the type of program: the greater universality and standardization are, the more progressive the impact should be; also social welfare, health care and family allowances programs usually have a more progressive impact than pension programs.

In practically all countries, pensions are calculated as a proportion of the insured's income and thus reproduce the inequalities of the general distribution of income. On the other hand, health benefits are basically equal, they are not proportional to income even though, in stratified systems, there are differences in availability and quality of services. Furthermore, the poorest groups suffer a higher incidence of diseases (due to lower nutrition and hygiene) and since private medicine is prohibitive for this group, the poor use the health program more frequently than those with higher income. This last group, even though covered, normally prefer to use private doctors and clinics and only resort to the social security system in extreme cases. However, it has been argued that health programs appear more progressive than they were if benefits were measured, not by their costs, but for the amount the user would be willing to pay for them. Family allowances also have a more progressive impact than pensions, as they usually are given to low income families and are equal and not proportional to salary. In addition, the poorest families are generally larger than those in middle-income brackets. Lastly, social welfare programs are directed at the poorest sectors of the population and thus probably have the most progressive impact on income distribution. As has already been indicated, as the social security system ages, a larger percentage of its expenses goes to pensions, which increases the regressive impact; nevertheless, this is compensated for by the extension of coverage and social welfare programs for those who are not covered [66, 80, 89].

A few studies have been done in Latin American countries (none in the non-Latin Caribbean) on the distributive effect of social security, particularly of health care (both social insurance and public systems) as well as one comparative study among five countries on the distributive impact of public subsidies.

Table 30 summarizes the results of three pioneering studies: Brazil's social insurance for pensions and sickness-maternity (urban sector only), Chilean social insurance, and Costa Rica's non-private health sector. The most progressive effect appeared in Brazil where the two insured groups with least income received benefits 23% higher than what they contributed, while the two groups with highest income paid 21% more than what they contributed. (Excluded from the study were FUNRURAL, which should have a strong progressive effect, and the armed forces and civil servants which probably received more than contributed.) In Chile, the two lowest income groups received 7% more than what they contributed (a transfer from the

Table 30

Impact of Social Insurance on Income Distribution
in Selected Latin American Countries: Between 1969 and 1978

BRAZIL (1973)[a] Units of Legal Minimum Wage	% Distribution of Contributions	% Distribution Health Benefits
Less than 1	17.2	32.4
1-1.9	14.2	22.2
2-2.9	21.1	22.5
3-3.9	12.9	9.5
4-8.9	23.1	10.1
9 +	11.5	3.3
	100.0	100.0

CHILE (1969)[b] Units of Legal Minimum Wage	% Distribution of Contributions	% Distribution Health Benefits
Less than 1	29.8	33.4
1-1.9	31.6	35.0
2-2.9	17.6	15.7
3-4.9	11.9	9.5
5 +	9.1	6.5
	100.0	100.0

COSTA RICA (1978)[c] % of Families in each Income Bracket	Percentage of Family Income Before Health Benefits	After Health Benefits
20 (poorest)	2.8	4.0
20	8.0	8.7
20	13.0	13.4
20	21.2	21.0
20 (wealthiest)	55.0	52.9
100	100.0	100.0

a All social insurance programs but limited to urban sector, excludes armed forces and civil servants.
b Social insurance sickness-maternity insurance and public health programs.
c Social insurance sickness-maternity (includes attention to welfare cases), public health and family allowance programs.

Sources: 1, 16, 106, 108

three highest income groups). A first study done in Costa Rica in 1973 (not in Table 30) showed a slightly progressive, almost neutral, impact of sickness-maternity social insurance. A second study also included family allowances and the ministry of health and was done in 1978, after population coverage had been notably expanded, salary ceiling contributions eliminated, and welfare programs added, hence the progressive effect increased: 2% was transferred from the wealthier 20% to the poorest 40% [1, 16, 37, 66, 106, 108].

Table 31 compares the results of the impact of public health expenditures (subsidies) on the family income of Argentina, Costa Rica, Chile, the Dominican Republic and Uruguay in 1980-1982. The comparison of the income distribution before and after receiving the subsidy (last two columns) shows that Costa Rica has the most progressive effect: a transfer of 2.5% from the wealthiest 20% to the poorest 40%. (Further analysis of the Costa Rican sample showed that the independent pension programs of the public sector had a very regressive effect while non-contributory pensions and other welfare programs had a remarkably progressive effect). Chile followed closely with a transfer of 1.9% from the wealthiest 20% to the poorest 40%. In the remaining three countries, there was a transfer of 1% from the wealthiest 20% to the poorest 20%.

Two recent studies done in Brazil and Uruguay add valuable information. An analysis of the impact of social expenditures in Brazil found that 41% of the poorest population received 18% of such expenditures and only 8% received social security benefits. Conversely 57% of the population -- with medium income -- received 70% of social expenditures and 35% of social security. The conclusion was that state subsidies mainly helped the middle class [57]. In Uruguay, an analysis of transfers found that the largest proportion went to the rural-domestic service sectors (with a highly progressive effect) and the second largest share went to civil servants and teachers (with a regressive effect). In addition the study found that the impact of the pension program was more progressive in the rural-domestic service sector and more regressive in the sector of civil servants, teachers, liberal professions, banking and notary public. Finally, it was confirmed that family allowances had a progressive effect [28, 32].

These empirical studies seem to confirm that welfare programs, health programs (particularly public) and family allowances have a progressive impact but not the pension programs. Within the latter, privileged civil servant programs have a regressive effect but non-contributory or rural-domestic programs have a progressive

Table 31

Impact of Public Health Expenditures (Subsidies) on Income Distribution in Selected Latin American Countries: 1980 and 1982

% of Families in Each Income Bracket	% Distribution of Health Subsidy	% Distribution of Family Income	
		Before the Subsidy	After the Subsidy
ARGENTINA (1980)			
20 (poorest)	51.2	7.5	8.5
20	17.4	11.7	11.8
20	18.8	16.1	16.1
20	8.3	22.5	22.1
20 (wealthiest)	4.3	42.3	41.5
Total	100.0	100.0	100.0
CHILE (1982)			
20	22.3	3.3	4.2
20	29.0	7.1	8.1
20	21.5	10.4	10.9
20	15.9	18.1	18.0
20	11.3	61.0	58.8
Total	100.0	100.0	100.0
COSTA RICA (1982)			
20	30.0	6.1	7.9
20	19.0	11.2	11.8
20	20.9	14.9	15.3
20	16.9	21.4	21.1
20	13.2	46.4	43.9
Total	100.0	100.0	100.0
DOMINICAN REPUBLIC (1980)			
20	41.3	5.1	6.2
20	16.1	9.1	9.3
20	20.1	13.4	13.6
20	13.5	19.7	19.5
20	9.0	52.6	51.4
Total	100.0	100.0	100.0
URUGUAY (1982)			
20	34.0	7.2	8.1
20	29.7	11.8	12.4
20	16.1	14.8	14.9
20	8.4	19.9	19.5
20	11.8	46.3	45.2
Total	100.0	100.0	100.0

Sources: 110, 112

effect. Countries with fairly unified and universal social insurance programs combined with welfare assistance are those with the most progressive effect.

4. Recommendations on Policy and Research

To avoid or reduce the negative effect of social insurance/security on employment and distribution, the following steps should be taken: (i) consider alternative financing sources, neutral in terms of employment effects; (ii) strengthen the programs of health care, social welfare and family allowances; and (iii) eliminate transfers to high and middle income while increasing transfers to low income groups (particularly in pension programs).

The following topics need to be researched: (i) evaluate the effect of health-care programs (of social insurance and MH) on health indicators, and compare such effects with those induced by other variables such as income, education, etc.; (ii) measure the impact of income maintenance programs on the population standard of living; (iii) analyze the advantages/disadvantages of alternative (to wage contribution) sources of financing, such as the VAT, income tax, etc.; and (iv) study, with the same methodology in several countries (including some from the non-Latin Caribbean), the impact of social insurance/security (both global and their specific programs) on various population income groups.

VII. THE IMPACT OF THE ECONOMIC CRISIS ON SOCIAL SECURITY

The economic crisis which began in the 1980s in LAC is the longest and deepest since the Great Depression. ECLAC has estimated that, in 1981-1989, the GDP per capita declined by -8.3% in the region (in twelve countries the decline exceeded -15%) and some specialists argue that LAC has lost one decade in terms of development [26]. This section reviews, in a summarized manner, the scarce information available on the impact of the crisis on social insurance/security revenues, expenditures, financial and actuarial equilibria, population coverage and benefits.

1. Revenues

Real income of social insurance has declined in most of LAC due to several factors. Real wages decreased in the 1980s (in 1989, eight out of eleven countries reported by ECLAC had a lower minimum real wage than

in 1980) hence provoking a fall in real contributions. Open urban unemployment dramatically increased in 1981-1989, in some countries as much as four times. Although the phenomenon began to abate in the mid-1980s, ten out of 66 countries for which data are available still had higher rates in 1988-1989 than in 1980. Those without jobs have ceased to contribute to social insurance. We have also seen that the informal sector expanded in the 1980s, reversing the trend of the 1960s and 1970s. Since the self-employed and other groups in the informal sector are usually not covered by social insurance, the shift from formal to informal labor has also induced a decrease in contributions. Furthermore, because those in the informal sector usually do not pay taxes (including social insurance), they have an edge and unfairly compete against the formal sector, contributing to the decline of the latter [26].

According to CLASC, annual average inflation in LAC jumped from 56% in 1980 to 275% in 1985 and, although it declined in 1986, it steadily rose in 1987-1989 reaching a record 994% in the last year. Argentina, Bolivia, Brazil, Nicaragua and Peru have had inflation rates from 1,000% to 33,600% [26]. In those countries that have a ceiling to wage contributions or where the latter is fixed according to income brackets, the fast increase in inflation (without proper adjustments of ceilings and income brackets) have led to a decline in real contributions. In addition, as we have discussed already, hyperinflation provides an extra incentive to employers to delay payments to social insurance because it is more profitable to deposit the money in the bank (which pays a higher interest than the one charged for mora) and pay later with devalued currency. The lack of indexation of employers' debts combined with low interest rates and soft fines imposed on delinquent employers have stimulated payment delays and social insurance revenues have declined. Inflation has also devalued the state debt and, in some countries such as Peru, has practically made that debt (in real terms) almost disappear. In addition, under increasing pressure to attend to more urgent demands, such as servicing the foreign debt, the state has failed to fulfill its obligation to social insurance not only as a third-party contributor but also as an employer (in some countries, the state has even retained tax revenue as well as employees' contributions to social insurance). Finally, real investment yields, which were negative even before hyperinflation, are now in a worse situation, because most investment and their interests are not indexed.

Outside of social insurance, revenues of public health and welfare programs have also declined dramatically.

Budget data show that public health expenditures per capita in 1978-84 decreased in 22 out of 24 LAC countries. Investment in new physical plant and equipment has been largely paralyzed in the current decade [88].

2. Expenditures

Prices of medicines and medical-surgical equipment have increased due to domestic as well as foreign inflation. Where salaries of social insurance employees are adjusted to inflation, this expenditure (the largest component of total expenditures) has maintained or even increased its real level while real revenues have declined (e.g., in Peru until the end of 1988). In the few LAC countries which have unemployment compensation, high unemployment rates have resulted in a jump in expenditures in such programs. For instance, in Barbados, unemployment benefits increased six times in 1983-86 as the rate of unemployment rose from 12% to 18%. In countries where social insurance provides free health care for the "indigent" (e.g., Costa Rica), as more people become jobless or informal they stop being contributors but become entitled to such a welfare program. The state is expected to reimburse social insurance for those welfare costs but, as we have seen, it has partially or totally failed to fulfill that obligation. In countries where sickness-maternity care is only available to the insured, those who have lost insurance coverage become dependent on the public health system, whose budget has been severely cut.

For a while at least, some social insurance programs continued adjusting pensions and other monetary benefits to the increasing cost of living, thus increasing their expenditures, e.g., Barbados and Jamaica until 1982, Panama until 1985, Peru in 1984-88 [Table 22, 78]. In Argentina, facing enormous deficits, the social insurance ministry allowed pensions to go under the 82% statutory adjustment to inflation (as low as 45%). This action prompted hundreds of pensioners to sue the ministry and they won an appeal to the Supreme Court. It was estimated that if all pensioners had been paid the amount due, the total sum would have equalled the Argentinian foreign debt. To avoid bankruptcy, the government had to enact a law declaring a national social security emergency [51, 66, 73, 76, 78, 118].

3. Actuarial and Financial Equilibria

With revenues declining and expenditures increasing or stagnant in the best of cases, the social insurance financial or accounting deficit in the upper-group countries became worse. Furthermore, the surplus enjoyed by most countries in the intermediate group turned into deficit in several of them. Actuarial disequilibria are, of course, in even worse shape, although accurate data are not available from several countries. Even late-comer countries, such as Jamaica, confront a financial disequilibrium in the short run. To cope with the crisis, several social insurance institutions have enacted emergency programs, the first in Costa Rica in 1983 and the latest in Peru in 1988 [66, 72, 78, 116]. These are geared to cut expenditures and, in some, to increase contributions. The latter, however, has been difficult to implement in the midst of the recession. Costa Rica's social insurance (CCSS) has been successful on both fronts and, in 1988, enjoyed a financial surplus. And yet the actuarial equilibrium of the pension program is expected to last only until 1990-91, and the cost of the independent pensions in the public sector required increasing state subsidies [51, 73, 76, 118].

A recent pioneering study has analyzed the effectiveness of social insurance as an anticyclical mechanism in Peru. Contrary to the belief that social insurance/security has an automatic stabilizing effect (i.e., it behaves anticyclically because in times of crisis it protects vulnerable sectors against income loss), the study reaches the opposite conclusion. The empirical analysis of the 1980s crisis shows that, due to the fact that income generation of the social insurance institute (IPSS) depends totally on the economic cycle, the effect is actually procyclical: benefits and services decline in times of recession and increase in periods of recovery and boom [102].

4. Coverage and Benefits

As we have seen, in the 1980s, population coverage of social insurance/security has declined or stagnated or its rate of extension has decreased substantially. Causes of this phenomenon are the increases in unemployment, the informal sector and evasion.

In addition, there has been stagnation or regression in the extension of coverage to the rural sector. The best information available is from IMSS-COPLAMAR which, since 1983, suffers the following problems: (i) a four-year stagnation in services in spite of growing population and declining living standards; (ii)

deterioration in some services in clinics and hospitals such as outpatient consultation, prescriptions and minor surgery, as well as a stagnant number of deliveries in clinics; (iii) cut in the number of physicians (pasantes); (iv) reduction in budgetary allocations and 55% decline in per capita expenditures in 1986 vis-a-vis 1982; and (v) delays (as much as three months in 1987) in state payments to IMSS-COPLAMAR forcing IMSS to take the needed funds from other programs (this problems was solved in 1988). Some of these negative effects are difficult to evaluate due to the fragmentation of services between IMSS-COPLAMAR and the ministry of health [115]. FUNRURAL in Brazil and Peasant Social Insurance in Ecuador appeared to have been affected by the crisis as well but we lack an up-to-date evaluation. Legal mandates to extend coverage to peasants and informal workers (such as in Peru, in 1985-1987) have not been implemented due to the severity of the crisis [78].

The crisis and emergency programs have eventually forced some LAC social insurance institutions to let real pensions decline, although recent hard data are difficult to find on this. Table 22 showed declines: in Barbados and Jamaica since 1983, in Colombia since 1980, in Costa Rica in 1980-1983, in Ecuador in 1980-1982, and in Uruguay in 1983-1985. In addition, there has been a decline in Argentina since 1987 [76]. Evidence on the deterioration of health services includes: paralyzation of investment in physical plant and equipment, cuts in medicine supplies, elimination of meals in hospitals (patients often have to provide syringes, gauze and other basic surgical materials), etc. [69, 78, 88].

Surprisingly, almost no data, less research, are available on these problems. Various international organizations have sponsored studies on the impact of the crisis -- e.g., the World Bank on poverty, PAHO on public health, UNICEF on child welfare -- but none dealing with social security [11, 25, 88, 92]. Perhaps the only benefits coming from the crisis have been the domestic and international realization (although not in all countries and organizations) of the magnitude and seriousness of social insurance/security problems. In the international arena, the World Bank, and more recently IDB and IMF, have begun to conduct studies and provide technical assistance, thus strengthening the work of traditional organizations such as ILO, WHO, AISS, PAHO and CIESS. USAID has expanded, in the 1980s, the resources allocated to health care in LAC. Finally, the crisis has prompted some international organizations, with divergent clientele and philosophies

-- sometimes in conflict, e.g., WHO and ILO -- to cooperate and try to resolve their differences [19, 59, 100, 123].

5. Recommendations on Policy and Research

The first priority is to solve or significantly alleviate the economic crisis of LAC through a multinational approach to the regional external debt problem. According to ECLAC, LAC suffered a cumulative net capital outflow of US$ 203 billion in 1982-1989, compared with a net capital inflow of US$ 89 billion in 1974-1981 [26]. The elimination or reduction of the net capital outflow or, ideally, its transformation into a net capital inflow, would facilitate a vigorous economic recuperation in LAC. The latter would induce increases in employment, the formal sector and real wages which, in turn, would raise social insurance/security contributions. Furthermore, the demand for welfare services, unemployment compensation, etc. would decline. But it is not advisable, to wait for the solution of the foreign debt to tackle the problems of social insurance/security. Therefore, the urgent need to apply the recommendations of this study.

Concerning research, it is indispensable to conduct a thorough study on the impact of the economic crisis on population coverage, revenues, expenditures, financial-actuarial equilibria and benefits of social insurance/security.

VII. THE NEED FOR REFORM AND ITS OBSTACLES

1. Recent History of Reform

The Bismarckian model of social insurance is not suitable for most of LAC, particularly for the less developed countries. A few countries in that region, the most developed (upper group) have been able to achieve universal coverage (or are close to that goal) but at a very high economic cost and, in most cases, without significantly correcting inequalities in coverage, financing and benefits, and improving managerial efficiency. In addition, these countries have faced (or currently suffer) serious financial and actuarial disequilibria and the state is no longer capable of subsidizing the deficit, particularly under the current economic crisis. These countries cannot postpone the crisis through changes in the financial method because practically all (except Chile's new system and Costa Rica) use pay-as-you go.

The crisis has prompted reforms of the traditional social insurance model in the pioneer countries. The two most radical (and opposite) reforms have been: (a) Full statization in Cuba (in the 1960s) which has accomplished universal coverage, unification-standardization, and elimination of most inequalities (except for the armed forces which maintain a privileged system and private farmers which are not eligible for monetary benefits), but the Cuban system confronts increasing deficits, which are covered by the state, and declining value of real pensions, (b) Increasing privatization in Chile (in the 1980s) which has continued the path towards universalization (after a brief interruption), standardized most entitlement conditions (also exempting the armed forces as in Cuba) and established a new solvent pension program but at the cost of an enormous increase in the deficit of the old system, as well as in the corresponding state subsidy [46, 50, 66, 74, 77, 85].

More moderate reforms were introduced, in the 1970s, in Brazil and Costa Rica to extend coverage to rural, urban-marginal and/or the dispossesed populations. This was done either providing equal treatment as the one given to the insured (on health care) or with meager benefits (on pensions). However, a Brazilian legal draft to discontinue the costly and inequitable seniority pension program (projected to double its costs in 1988-2000) was defeated. Costa Rica, in spite of a comprehensive study concluded in 1988 and the subsequent public debate, has not been able to either eliminate the burdensome and privileged pension programs for civil servants (estimated to have increased their costs by 2.5 times in 1988-1989) or to raise the low age of retirement within the general pension program [58, 75].

Minor reforms applied in Argentina and Uruguay have not been able to correct the fundamental problems of the crisis. Early in the 1970s, Uruguay initiated a process of unification and standardization, increased somewhat the ages for retirement (from 55/45 to 60/55, still quite low) and eradicated some costly benefits, but failed to establish the bases for a long-term solution. Furthermore, in 1979, a law permitted early retirement under liberal conditions which prompted a retirement avalanche in 1980-1981 and a sharp jump in the deficit. In 1987-1988, a more substantial reform eliminated various privileged programs, mandated the adjustment of pensions to the wage index of the previous year and set a pension ceiling. But Congress rejected the proposed increase in retirement ages (from 60/55 to 65/60) which is fundamental to balance the system [33]. Last but not least, during the national election campaign of 1989, practically all political parties endorsed

a Constitutional amendment, that was eventually approved, to adjust pensions to the cost of living starting in April 1990; this measure will require an increase of 8 to 11 percentage points in the VAT or wage contributions or face a 150% increase in inflation.

In Argentina, the secretary of social security prepared a legal draft in 1986 to increase retirement ages and establish more solid financial bases, but that draft was not even discussed by the Congress. In 1988, the secretary planned a macroeconomic study of three years with the objective of either maintaining the current system with minor reforms or substituting it with a new system; the latter would provide a basic pension to be supplemented with a new pension program characterized by close correspondence between premia and benefits. But the project was too long (wasted the opportunity of the change in government), did not eliminate the current onerous entitlement conditions, based its finances on a controversial fixing of an annual 7% of GDP, and included aspects of dubious practical utility. In 1989 the project, as initially conceived, was paralyzed but a few studies were being conducted [76].

Latin American countries at the intermediate group cover less than half of their population and, until the 1980s, appeared to be in better financial shape than those in the upper group. A few of these countries were able to rapidly extend coverage in the 1970s (e.g., Panama, Mexico, Venezuela) by covering part of the rural sector or partly integrating health services -- in the last two countries aided by the oil boom. The crisis of the 1980s has paralyzed or slowed down these advances and some of these countries have begun to experience the disequilibria typical of the pioneer countries. The most dramatic case of political resistance is that of Panama: in 1986, Peter Thullen, a pioneer of actuarial studies in the region and former director of the ILO Division of Social Security, studied the Panamanian pension programs and recommended an increase in the age of retirement and the elimination of early retirement as the only way to save the CSS from bankruptcy. The government did not dare to go as far as Thullen recommended, but submitted a draft increasing the age of retirement somewhat. This was followed by street demonstrations, and Thullen was declared "persona non grata" [126].

The least developed Latin American countries typically cover less than one-fourth of their populations but, at least until the 1980s, enjoyed financial stability. The extension of coverage is limited by both structural

barriers and the economic crisis; furthermore, the latter has contributed to a deterioration in the financial situation of some of these systems. For instance, in the Dominican Republic, a legal draft elaborated in the 1980s to extend population coverage of the system was voted down in congress under pressure from the private physicians lobby and, in 1987, the social insurance institute (IDSS) was at the verge of financial collapse due to widespread corruption by the previous administration [69]. Guatemala -- with IDB aid -- is in the process of extending coverage of the sickness-maternity program to less developed regions. A serious problem confronted by these countries (as well as some at the intermediate groups such as Bolivia, Colombia and Ecuador) is that universalization of coverage with the current model would lead to exorbitant costs (from 11% to 39% of GDP).

The non-Latin Caribbean countries have been able to combine almost universal coverage (based on political commitment, the British model and geographical advantages) with solid finance at least until the mid 1980s (based on the newness of their pension programs, as well as investment efficiency, and/or low administrative and benefit costs). However, the Jamaican system faces a financial imbalance in the short run because of a significant increase in pensions and other monetary benefits enacted in 1987 without raising contributions accordingly (public health care encounters serious difficulties also). Barbados confronts a deficit in the welfare program (subsidized out of general reserves), and a serious erosion in the reserves of the unemployment program; the latter is due to a mandated increase in its benefits and reduction in its contributions, at the time that unemployment increased [73].

Clearly most countries in the region are in need of reform but, with few exceptions, attempts to introduce such changes have failed for reasons explained below.

2. Obstacles to Reform

For the pioneer countries, the objective of reform should be to put the system on a sound financial basis. However, they already endure a heavy burden in terms of wage contributions (from 29% to 58%, except Cuba) and state subsidies (49% of total costs in Chile, 56% in Cuba). Therefore, in order to attain financial equilibrium they will have to cut expenditures rather than increase revenue -- except through the control of evasion and payment-delay. In Cuba it is feasible to introduce a contribution to be paid by the insured who

currently do not pay any. Chile could consider a modest contribution from employers (who currently do not pay any) and perhaps a small increase of the insured's contribution to help finance the deficit of the old system, and the cost of social welfare, family allowances and unemployment compensation (all of these currently paid by the state).

Pensions take the highest percentage of expenditures in the pioneer countries, hence to reduce costs they have to implement the recommendations of this study (IV.4) such as: eliminate early retirement and seniority pensions, increase the age of retirement and make them equal for both sexes, adjust pensions to the wage index rather than cost-of-living increases, restrict dependents entitled to survivor pensions to spouse and children, abolish privileged pensions, etc. For more financially troubled pioneer countries, the solution might be in establishing a universal basic pension (perhaps conditioned to a means test) combined with a supplementary pension program strictly correlated to the premia paid. The latter could be administered by private and/or public organizations.

Technical reports prepared by world-renowned experts and sponsored by international organizations support many of these changes [14, 25, 33, 50, 58, 68, 75, 125]. But the obstacles to implementing the reform, as we have seen, are essentially of a political nature: privileged groups and, sometimes, the population close to retirement resist change, and politicians do not want to confront this opposition due to fear of losing an election. Recent defeats of legal drafts in Argentina, Brazil, Panama and Uruguay, as well as legal inertia in Costa Rica, are a clear indication of what is said above. In the first country, pensioners are a powerful group that has effectively lobbied in the past. The social security technical bureaucracy endorse the reform in most countries; however, there are cases in which bureaucrats have tried to save the old regimes either for inertia or fear of change. The need to educate the population, government leaders and bureaucrats on social security reform is obvious.

In intermediate and, particularly, lower group countries, the goal of reform should be to extend population coverage with a solvent financial system, viable in the long run. Structural barriers to extension could be overcome following models such as IMSS-COPLAMAR, FUNRURAL and SSC, but avoiding their flaws. Among financially troubled countries in the intermediate group, where half or more of the population has

already been covered, a more urgent priority is to save the system from bankruptcy. With a couple of exceptions, the bulk of expenditures in these two groups of countries goes to the sickness-maternity program and, although tightening of entitlement conditions for pensions is advised, the most important target of the reform should be to put the sickness-maternity program on a solid self-financed basis. As it has been said already (IV. 4), this would imply the elimination of generous benefits, integration of health-care services, etc. Some of these countries still have a relatively low burden and may be able to increase contributions somewhat. In two intermediate countries (Bolivia and Ecuador) the bulk of expenditures is in pensions, hence they should follow the recommendations given for the pioneer countries. The non-Latin Caribbean countries are in better financial shape and could solve their problems with increases of their currently low contributions and, in Jamaica, with a better investment policy.

In the large majority of countries, in order to achieve success, reform would also need to include a drastic cut in administrative expenditures. It would be unfair and politically unacceptable to impose sacrifices on the insured, pensioners and employers, while the hypertrophied bureaucracy is left untouched. Trimming and training personnel and setting reasonable salaries and fringe benefits are essential. This of course is easier to say than to implement as mass dismissals are a political problem especially in the midst of a prolonged recession. And yet the first priority of social insurance/security should be the welfare of pensioners and the insured rather than that of the employees.

A scholar specializing on social insurance reform in the Southern Cone and Brazil has argued that populism and democratic government, in spite of many studies and attempts, have failed to achieve that task because a global social security transformation is not possible without a reform of the political system: pressure groups are very influential and the state lacks the power to restrict their privileges. Under bureaucratic-authoritarian regimes, in the 1960s, 1970s and 1980s, the armed forces demobilized political and union groups and reduced their power. With varying degrees of success, the state was able then to depoliticize social security and, with the aid of technocrats, to unify and bring uniformity to the system and eliminate part of its privileges (excluding the armed forces). In Brazil, however, the state had less power than in Chile and, therefore, the reform was the result of a compromise among several groups [15]. Another study comparing

the two most radical reforms in Latin America (Chile and Cuba) reaches similar conclusions. These two pioneer countries had achieved high population coverage but their systems suffered from excessive multiplicity, stratification, inequalities and financial difficulties. These features were the result of an early inception of their systems, combined with urbanization, industrialization, political activism and unionization. Several attempts at changing that situation failed, and it took the power of two authoritarian governments of dramatically opposed ideologies to introduce radical reforms.

With the regional trend toward democratization, the LAC governments confront more than ever before the urgent need of profoundly changing the traditional social insurance model. A great challenge to democracy in the 1990s is to construct a national consensus -- based on citizen education, awareness of the problems and shared sacrifice -- to launch a successful reform. If this task is not achieved, the current leadership will be responsible for the ominous outcome of their negligence.

3. Recommendations on Research

We need to study: (i) political aspects of social insurance reform, analyzing the causes of success/failure in several countries (both in LAC and other regions in the world) to improve the feasibility of future reforms; (ii) how international organizations can provide and condition their aid in order to promote the needed reform; and (iii) methods to educate the leadership, the technocracy and the population at large on the need for the reform.

IX. THE EXPANDING GAP ON SKILLS AND TRAINING

1. The Supply and Demand of Social Security Experts

The social insurance/security crisis has induced an increase in the domestic demand for skilled personnel in planning, computation, financing, investment, health economics, etc. as well as researchers. Furthermore, the economic crisis in LAC has induced international and regional organizations to intervene in this field: (a) In addition to its traditional work on health and nutrition, since 1983 the World Bank is requesting social security reforms as conditions linked to structural adjustment loans or as part of sectoral studies or investment reviews (e.g., in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Uruguay).

A small cluster is being developed at the Bank to deal with issues such as social expenditures and social security and, for 1990, there are plans to expand the study of some of the above-listed countries as well as new ones (e.g., El Salvador, Dominican Republic) [59, 60]. (b) USAID has significantly expanded funding for health-care financing and management in LAC (particularly in the Caribbean Basin and less developed countries in South America), supporting large research and technical advice projects both at the regional and country levels. The first stage of a regional study of three years, focused on LAC health financing, has been completed and the second stage is to begin in 1990; it will place similar emphasis on health financing, management and nutrition. (c) The Inter-American Development Bank (IDB) Board of Governors commissioned in 1985 a study to identify the major financial-economic problems of social security in LAC and the ways through which the IDB could provide aid in this field. The new President of IDB is considering some activities in technical aid, financing and training based on the capital replenishment of the IDB fund. (d) The ILO, WHO and PAHO continue their customary work on social security and health care in LAC. (e) The IMF fiscal division has begun to study social insurance/security in LAC and is considering to include it in its stabilization programs [50]. (f) PREALC recently concluded studies on protection of the unemployed and the informal sector by social security or alternative means [10, 79]. (g) ECLAC sponsored, in 1983-1984, the first comparative study in Latin America on social security financing and development [66]. (h) The U.S. Social Security Administration (SSA), in addition to its biannual compilation of LAC social security summaries, has occasionally provided actuaries to selected LAC countries.

While domestic and international demand for experts is booming, their supply is minute, stagnant, and deficient in quality. There are very few well trained economists on social security and health care with substantial experience and language ability on LAC. For instance, within PAHO, the most important regional agency on health, there is only one health economist who, in 1988-89, was on loan to the World Bank. The latter only counts with half a dozen experts on these fields but none works full time on them, hence, the Bank basically relies on external consultants. In the ILO, the number of experts on LAC has declined and the former director of the social security division, who knows LAC well, retired in 1989. In the whole region, there are less than a dozen economists trained on social security and the search for European experts with

expertise in the region has not been successful. Obviously, the gap of experts is rapidly growing.

2. The Inadequacy of Available Training

There are three institutions which offer training on social security in LAC. In Mexico, the Inter-American Center for Social Security Studies (CIESS) has organized, in the last 25 years, numerous seminars and courses, lasting from four days to five weeks (annual average is two weeks) on diverse subjects such as: hospital administration, medical services, preventive medicine, labor safety, administration of personnel, budgetary programming, accounting and finance, financial planning, and information, computers and calculus. There is a general course on economics which lasts three weeks, one on social security that takes five weeks, and one on actuarial analysis for four weeks [21, 22]. Although CIESS has played a significant role in expanding knowledge and training in the region, it does not have a university linkage and the short duration of its seminars clearly indicate that the training it offers is not an adequate substitute for sophisticated technical or university training in fields such as: actuarial science applied to social insurance, economics of social security, health-care financing and administration, investment of pension funds, etc.

The Iberoamerican Organization of Social Security (OISS), in Madrid, has offered courses on social security for more than thirty years, but the quality and length of such courses as well as the number and caliber of students registered have gradually declined in the last 15 years. The Central University of Venezuela has had a master degree on social security for about a decade, but it is heavily oriented towards law and history with little practical application.

In the United States, the SSA occasionally brings personnel from LAC-homologous institutions for brief internships on computer training and other administrative matters. There is not in the USA a formal university training program on social security applied to LAC. However, there are several schools of public health with a focus on LAC (e.g., Columbia University, SUNY Stony Brook, University of Florida, University of Michigan, University of New Mexico, University of Pittsburgh, and University of Texas). Cornell University has offered, for many years, a major on social security at the School of Industrial and Labor Relations, but the latter lacks experts on LAC. The only university focus on social security with application to LAC is at the University of Pittsburgh, which in its faculty (associated with the Center for Latin American Studies) has

experts on economics, public health, political science and other fields applied to social security and has, in recent years, produced a dozen graduates (masters and doctorates).

Latin Americans who study economics in U.S. universities invariably specialize in fields such as international and trade economics, money and banking, development, econometrics, and the theoretical fields. There now exists a surplus of this type of economist in several LAC countries who cannot find suitable employment and many return to the United States. On the other hand, the number of LAC economists trained on social security and health-care financing is minuscule. This is partly explained by the ignorance of most LAC candidates for graduate work in the USA of both the fields of training offered here and work opportunities available after graduation. Another important reason is that U.S. foundations and fellowship programs (e.g., IIE, LASPAU, Ford, IAF, Fulbright) do not include economics of social security and health care among their priorities, much less support specific programs to train Latin Americans in those fields. In the same manner, U.S. programs which bring Latin American leaders to become more knowledgeable of U.S. institutions (e.g., Hubert Humphrey Fellowships) lack any interest in social security. Finally, international development agencies, which increasingly demand experts on social security, do not have any resources allocated for their training. However, the World Bank Economic Development Institute (EDI) began in 1987 a series of three-week workshops on health-care financing, holding the first two in Brasilia and in the non-Latin Caribbean.

3. Recommended Training Programs

As the Latin American, U.S., and international demand for social security experts substantially increased in the 1980s (and will boom in the 1990s), the supply of such experts is grossly insufficient. There is an urgent need to develop the following programs of training with financial support form U.S. foundations, fellowship programs and international development agencies.

a. Master Program: This university graduate program would take a minimum length of two years, with common courses and various foci from which students would select one specialization (e.g., economics of social security, health-care financing, hospital administration, actuarial science applied to social insurance, capital markets and investment, politics of social security, etc.). Students would have to take a series of courses,

participate in an integrative seminar, write a research thesis, and participate in a field project in LAC or complete an internship in an international organization (e.g., World Bank, WHO-PAHO, ILO). This program should be organized by a prestigious university, with sufficient experts on the field, and would require external financing for a period of five years (until the program would be consolidated) for fellowships, development of seminars and other activities.

b. Recycling Professionals: This program would identify well-trained graduate students from U.S. and Latin American universities, in disciplines related to social security and with substantial field experience. Selection would be made by international competition and the winners awarded fellowships. They would spend from eight to twelve months in prestigious U.S. universities which have experts on the field. Each fellow would be assigned to a faculty member specialized on LAC social security or health, who would: design a program of selected readings, engage in discussions with the fellow, and integrate him/her on an ongoing research project on this theme and applied to LAC. In addition, there would be a brief internship in an international organization. This program would require temporary external financing for fellowships.

c. Training Seminars and Policy Workshops: Training seminars would follow the EDI model, last from one to two months, be geared to personnel from LAC institutions on social security or health care, and deal with subjects (or be at a level) not offered by existing training institutions. Another alternative would be to provide technical assistance to CIESS and finance the participation of well-trained professors in order to incorporate these new seminars in the CIESS program and strengthen some of those currently offered there.

Policy workshops would last from one to two weeks and be held in a LAC country covering a subregion (e.g., Central America, non-Latin Caribbean, South America). Participants would be top decision-makers form social security and public health institutions, ministries of planning, finance and economics, and central banks, as well as congressmen. The objective of the workshop would be to discuss crucial issues which require better understanding and communication among several sectors of the executive and legislative branches, in order to facilitate the decision-making process as well as the reforms.

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