

**Report No. 24300-CR**

# Costa Rica Social Spending and the Poor

(In Two Volumes) Volume II: Social Sector Performance in the 90'S:  
Facing the Challenges

**October 31, 2002**

Human Development Sector Management Unit  
Central America Country Management Unit  
Latin America and the Caribbean Region



**Document of the World Bank**



**CURRENCY EQUIVALENTS**  
(Exchange Rate Effective June 13, 2002)  
Currency Unit = Costa Rican Colones  
US\$ 1 = CRC 357.62

**WEIGHTS AND MEASURES**

The Metric System is used throughout the report

**FISCAL YEAR**

January 1 to December 31

**ABBREVIATIONS AND ACRONYMS**

BCCR	Costa Rica Central Bank
CCSS	Costa Rica Social Security Agency
EBAIS	Basic Team for Comprehensive Health Services
GRD	Diagnostic Related Group
INEC	National Institute of Statistics and Census
IPC	Index of Consumer Prices
IVM	Insurance for Disability, Old Age and Death
ICAA	Costa Rica Institute for Aqueducts and Sewers
INS	National Institute of Insurances
MS	Costa Rica Ministry of Health
OPC	Agency for Complementary Pensions
PEA	Active Economic Population
PIB	Gross Domestic Product
RNC	Non-Contributing Regulation of Basic Amount Pensions (CCSS)
SUPEN	Pensions Superintendence
SS	Social Security
UCR	University of Costa Rica
UPH	Unit for Hospital Facilities Production

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## ACKNOWLEDGMENTS

This report consists of two volumes. Volume I presents the report's main policy recommendations. It includes a poverty profile and identifies the main vulnerable groups in the country. It also contains a summary of the social sector expenditure review, which identifies the main efficiency and targeting opportunities to improve the effectiveness of social spending in reducing poverty, and a review of institutional issues which are important for improving coordination and complementarities among programs. Volume II contains a detailed review of social spending in education, health and nutrition, pensions and social assistance with specific recommendations for improving the effectiveness of the public sector programs in these sectors.

The report is a joint effort by Government of Costa Rica and the World Bank and was co-task managed by Helena Ribe (Sector Leader Human Development) and Roxana Viquez (former President of IMAS in Costa Rica). Volume I was prepared by Tarsicio Castañeda, James Cercone and Luisa Fernandez (Consultants) and volume II by James Cercone, Fabio Durán, Rodrigo Briceño, Stephan Brunner, Juan Diego Trejos and Suhas Parandekar. The peer reviewers were Lynne Sherburne-Benz (Sector Manager, Social Protection) and Margaret Grosh (Lead Specialist, HDNSP). Valuable comments and suggestions were provided by Andres Rodriguez, Luis Carlos Hernandez, Francisco Esquivel, Ana Mercedes Brealey, Jose Elizondo, and Nohemi Araya (from Costa Rica), and by Indermit Gill (Lead Economist Human Development Sector), Carlos Felipe Jaramillo (Lead Economist), Kathy Lindert (Senior Economist), Joel Reyes (Senior Institutional Development Specialist), Maria Luisa Escobar (Senior Economist), Juan Prawda (Lead Education Specialist), Quentin Wodon (Senior Economist) and Ana Lucía Armijos (Senior Economist). This volume was edited by Ms. Joy de Beyer. Marlene Sims (Language Program Assistant) provided assistance in the production of the report.

The previous draft of this report was reviewed by members of the Social Cabinet of Costa Rica and their comments have been taken into account in this report. We greatly acknowledge the collaboration of other government officials and consultants in Costa Rica. Nonetheless, the opinions presented here and any errors are the sole responsibility of the authors and should not be attributed to the individuals or institutions acknowledged above.



# **COSTA RICA: SOCIAL SPENDING AND THE POOR**

## **VOLUME II**

### **EXECUTIVE SUMMARY**

1. During the decade of the 90's, Costa Rica made impressive progress in making social spending a priority and increasing the allocation to priority programs. However, analysis indicates that the results have been mixed. In some areas, notably healthcare, Costa Rica's striking performance is a sharp contrast to other countries in the Region and even approaches some OECD countries. In other areas, such as secondary education, progress has been uneven and there is increasing evidence that more spending alone will not solve the problem. Finally, access to services for poor groups has improved considerably, however, a lack of targeting mechanisms reduces the cost-effectiveness of social programs. This document takes a close look at the trends in social spending and social policy during the 90's with the objective of assessing the overall performance of social sector programs and investments, and identifying key challenges and possible policy options. This volume complements the analysis of social spending and poverty in volume I and provides in depth information on each of the social sectors. It is important to note that this report incorporates only limited data from 2000-2001 for the purposes of consistency of data availability and data quality among sectors.

2. During the 90's, most of the social sectors were engaged in a reform process that made changes aimed at addressing issues of access, efficiency and quality of public services. Many short-term gains were evident at the time the reforms were made, and many of the initiatives should have produced medium to long-term changes. By analyzing a ten-year time frame, the trends in spending and results are clear and provide interesting evidence of the impact of social spending as well as the unfinished agenda that faces policymakers in the 21<sup>st</sup> century.

3. During the 90's, the Costa Rican economy grew at an average of 5 percent, out-performing the previous decade. The most dynamic sectors were manufacturing and services industries. However, macroeconomic problems persist. The main problems are fiscal, particularly the continued increase in the country's internal debt. A byproduct of fiscal pressures is a potential stagnation in social investment and weakening of the institutional structures required to meet the challenges facing the social sectors.

4. A stable macroeconomic environment allows governments greater maneuvering room when assigning budgets to public institutions. In Costa Rica, steady growth and relative macroeconomic stability during the 90's provided favorable conditions for social spending. However, higher spending has not resolved all of the problems facing the social sectors.

5. During the 1990's, public expenditure grew nearly 70 percent in real terms. The greatest increases – more than double in real terms – were in basic education, social security pension funds and economic services. The share of total public expenditures allocated to the social services increased from 59 percent in 1990 to 63 percent in 1999, with minor fluctuations in the intermediate years.

6. Both health and housing expenditures presented reductions in terms of their relative participation with respect to the total public expenditure. Education expenditure presented a slight increase, close to 4 percent, while pensions expenditure presented the greatest increase, estimated at close to 5 percent.

7. Social expenditure increased from 14 percent of GDP in 1990 to 15 percent in 1999, mainly because of increases in pension expenditures from 1995 onwards. Education sector spending increased slightly as a percent of GDP and health sector spending decreased approximately one-half of a percentage point.

8. Over the last ten years, the main indicators show important accomplishments: life expectancy at birth is close to 76 years, the infant mortality rate dropped from 15 to 13 for every thousand live births (10.3 in 2001), access to drinking water is practically 100 percent and illiteracy has dropped to only 5 percent of the population over 12 years of age. Despite these accomplishments, Costa Rica has lost ground in the classification of countries according to the Human Development Index, descending from 28<sup>th</sup> place in 1990 to 48<sup>th</sup> today. Some of the persistent problems are infrastructure, human capital investment and poverty. The bottleneck is still the limited effect the main policy measures have had on the poorest individuals.

9. Despite the growth in expenditure, many of the key social sector indicators have leveled off. This underscores a key finding of this report: that the social sector challenges will not be resolved by allocating more resources, but by undertaking structural reforms that improve management and efficiency. This requires the elimination of structural obstacles in most sectors. The situation is exacerbated by the fact that macroeconomic projections do not show signs of the consistent growth that characterized the past ten years and allowed the government to continue increasing investment in the social sectors; this adds emphasis to the urgent need to address the structural issues in the social sectors to prevent further deterioration of the country's social indicators in the near future.

10. The reduction of poverty still represents one of the greatest challenges for public policies in the social sectors. One accomplishment in this area is that the proportion of households below the poverty level dropped from 29 percent to 20 percent during the decade and the proportion of indigent households dropped from 10 percent to 6 percent. However, stronger economic growth during the second half of the 90's has not been reflected in lower poverty indices. There is no consensus as to whether or not this situation represents stagnation in social conditions. While little progress was made in reducing poverty between 1995 and 1999, during this period social indicators do show improvements that are normally associated with better living conditions, such as reductions in infant mortality and improvements in life expectancy. In education, the nineties present alarming evidence of a decline in quality and efficiency, and high levels of high school dropouts are directly related to the deterioration in the quality of the education. Policies in the education sector should aim to provide better access and coverage for the poorest children as a priority, to provide a foundation for alleviating poverty more effectively.

11. The Costa Rican government clearly needs to design new strategies and use new instruments in the struggle against poverty, especially in the current situation where economic growth may be limited. The analysis of trends in social spending provides important indications on how to restructure social sector policies to obtain improvements in social indicators and, thus to become an efficient instrument for reducing poverty. Social expenditures must improve. Improvements can be made in two general areas: (i) better efficiency and targeting of education and health expenditures; (ii) more strategic use of the resources directed to social protection programs so that they cover the groups at risk and complement the efficiency of the sector programs. A focused strategy toward the poor requires identifying who the poor are, their living conditions, education level, and other general characteristics, in order to design appropriate policy instruments that will lead to satisfactory results. Besides the clear identification of risk groups, it is necessary to improve institutional coordination and to develop a more effective evaluation and monitoring system.

The following sections highlight the report's key findings in each of the social sectors:

### *Education Sector*

12. In *education*, there were important improvements in the nineties but some flattening out of trends in the second half of the decade. Enrollment at pre-school level (for children between 5.5 and 6.5 years of age) increased from 62 percent in 1990 to 83 percent in 1999, but important differences persist across regions and socio-economic classes. During the second half of the 90's, enrollment of 5 year-old children in the lowest income quartile was 50 percent lower than the highest income quartile; furthermore, enrollment shows great differences between urban and rural areas. In primary education, coverage measured by gross enrollment rates has been practically complete since the end of the 80's, but at the high school level the situation varies considerably. According to data from the household survey, approximately 50 percent of youth between 16 and 18 years of age do not attend school, and only 38 percent of adolescents between 16 and 18 in the lowest income quartile are enrolled in school; 39 percent in the case of rural area population. It must be pointed out that the situation is inequitable for the lower income quartile in most aspects analyzed, underscoring the need for changes in education policies to improve the education of the poorest, especially if achieving better education levels is considered a necessary condition for reducing current poverty levels.

13. The inefficiency in the education sector is a real challenge with direct and costly results as shown by high repetition and dropout rates, especially in the first years of each education cycle (first and seventh grades). In 1990, 77 percent of primary school graduates had repeated at least one of the six previous grades and by 1999 the figure had increased to 79 percent. For high school education, the percentages were 42 percent in 1990 and 48 percent in 1999. Permanent high school dropout is a serious problem linked to inefficiency problems at primary school level; problems are greater for the lowest socio-economic groups (in 1999 the dropout rate was 4.4 percent in primary school and 9.2 percent in high school). The population with complete primary school education shows important differences by income levels; for example only 62 percent of children in the lowest income group have completed primary school as opposed to 92 percent of children in the highest income group. This pattern is even more evident at higher education levels: only 15 percent of 20 year-old youth in the lowest income group have completed 12 years of education while the proportion is four times greater for the highest income group. Three possible factors to explain this are: (i) the high cost of education, mainly the costs of learning materials, fees and other expenses, which are a significant in most schools and high schools; (ii) the high opportunity cost for poor people who attend school (only 36 percent of the poorest households dedicate time exclusively to schooling, whereas this proportion is 70% for richer households) and; (iii) the deficient quality of basic education, which may be contributing to repetition and dropout rates.

14. Four education sector programs have been developed in an attempt to reduce inequality in the system: School Vouchers, Student Transportation, School-Lunch Programs and Scholarships. In 1999 these programs amounted to 5 percent of the education sector budget, with the School-Lunch program using the most resources. There is, however, a problem in resource allocation since beneficiaries in the lowest income quintile receive less than 40 percent of the School Voucher Program benefits and 34 percent of the School Lunch Program benefits. These problems are the result of the universal concept under which these programs function, and because targeting criteria for the most vulnerable groups have not been applied in allocating resources.

15. Education programs need to be better adapted to the requirements of the labor market and to focus on providing high quality rather than just universal coverage. Considerable efforts are need to develop intensive technology-based schools, as well as to update and access academic programs and didactic materials currently recommended in primary and high school education. If the quality problems in the Costa Rican education system are efficiently attacked, current inefficiency levels may be significantly

reduced, resulting in a decrease in repetition and dropout rates. Reducing these two problems would release significant amounts of resources for improving the quality and performance of the education system.

16. The relationship between people's education level and their earnings in the labor market shows important differentials across education levels. More educated workers receive, on average, considerably higher salaries. A person with a college education earns an average salary of US\$800, while people with just primary school earn only US\$250 and people with a high school education earn US\$375. It is relevant to point out that only one-third of the 20-year-old youth in the lowest income group have completed high school, and that there are regional, gender, and income differences within higher income groups.

17. The education sector budget represents close to 4 percent of GDP and constitutionally must reach 6 percent of GDP in the next ten years. Costa Rica has a lower education expenditure with respect to GDP than any OECD country. In addition, the 12 percent share of spending that Costa Rica allocates to primary education and the 18 percent share that goes to high school, is similar to middle income countries, but lower than OECD countries.

18. Education expenditure was a relatively stable proportion of GDP during the 90's, but the MEP expenditure shows a decreasing trend. Capital expenditures (infrastructure, technology, etc.) have decreased and the main component of education expenditures is salaries. In real terms, expenditure has been increasing at all levels. Real expenditures on primary and high school education accelerated during the second half of the decade. Real per capita expenditure at the technical and para-university education levels have decreased. In the case of primary education, 70 percent of the resources are spent on the poorest 50 percent of the population, indicating that the distribution is very progressive, but in the case of university education 70 percent of resources are received by the 3 richest deciles of the population thus leaving the poor without access to the opportunities and income that are associated with higher education.

19. Education is an efficient tool for structurally reducing levels of poverty in the country. Because of its high efficiency it is necessary to develop programs and policies that encourage access for lower income groups and deliver high quality programs that provide value-for-money. While improvements were made over the last decade, the failure to target the poor while increasing coverage levels in primary and high school, led to only limited advances for this segment of society. Keeping this in mind the main priorities and policy recommendations in the education sector are:

- i) Increase pre-school level coverage, adopting three aims: expand coverage in rural areas, improve the quality of education by introducing a pedagogical component, and promote greater parental participation. As part of this coverage increase, it is planned to expand access of poor 0-5 year old children to Early Childhood Development (ECD) type programs, and to target beneficiaries of CEN-CINAI better;
- ii) Improve the quality of basic education, by reducing repetition and dropout rates, especially in the first and sixth grades, improve learning tools and introduce computer education;
- iii) Encourage greater coverage and improve the quality of high school education concentrating efforts in rural areas and in the lowest socio-economic groups. The objectives at this level include curriculum review and designing new teacher training schemes;
- iv) Improve targeting and equity: particularly in the programs directed toward poor students. One of the ways to do this is by encouraging forms of non-traditional teaching that may increase the performance of the education sector, particularly at high school level. These include high school telegrams, long distance education programs, tutorial programs and virtual schools.

## ***Health Sector***

20. The health sector underwent deep structural changes during the past decade. The reforms left a legacy of achievements and pending issues. The key achievements during the decade include: higher life expectancy, lower infant mortality rates, lower incidence of certain diseases, and better health service coverage, among others.

21. From 1996 to 2000, the CCSS introduced key changes aimed at extending access to primary care services, establishing a framework for decentralization, improving community participation by introducing *Juntas de Salud*, strengthening hospital management and introducing a culture of performance based evaluation. During this period, more than 800 basic health teams (EBAIS) were established to decentralize healthcare services and provide improved access for rural and marginalized populations. A law on decentralization was approved to consolidate the process that introduced management agreements between the CCSS and public hospitals, and established health areas (or groups of EBAIS). The management contracts incorporate a clear definition of objectives for all healthcare providers and establish an evaluation process that motivates improvement. By the end of the decade, results were already evident in lower average length of stay, lower hospital infection rates, greater user satisfaction, and the introduction of total quality management programs.

22. All of these achievements were made with a focus on controlling costs and improving value-for-money. On the expenditure side, the health sector share of total social sector spending declined during the decade from 37 percent in 1990 to 33 percent in 1999. The CCSS spending as a share of GDP declined from 4.4 to 4.1 percent. Overall, total public health sector spending declined from 5.9 to 5.3 percent over the decade. Despite this fall as a share of GDP, real CCSS expenditures experienced continuous increases, but slowing down from 1997. Real per capita public expenditure on health increased 19 percent during the decade, to almost US\$ 210 in 1999. The CCSS expenditure trend is characterized by a continuous increase: a 36 percent increase in real expenditures and a 27 percent increase in real per capita expenditure. Private health expenditure is among the lowest in the Latin American region (20 percent of all health expenditure in 1998 was carried out in the private sector), but at national level, it is significant as it represents close to 2 percent of GDP.

23. Despite the strengthening of primary care there is still important inequity in resource allocation. This inequity is the legacy of a resource allocation system that was based on supply, rather than demand. For example, data for the year 2001 show that the Limon Health Area receives the most resources per capita, a total of 60,154 colones yearly per inhabitant, while the Pérez Zeledón Health Area, despite the great needs of its population, receives the least resources – a total of only 1,202 colones per person per year. Average expenditure per person across all the Health Areas is approximately 16,000 colones but there is a standard deviation of over 10 thousand colones, indicating enormous differences across Health areas. This situation indicates a need to improve the resource allocation scheme so that resources are based on the real health needs of the population.

24. On the provision side, a number of important trends have been observed. The data analyzed show a clear trend toward increasing use of general practitioners and ambulatory services, which will eventually lead to lower costs and shorter waiting times. Real expenditures on pharmaceuticals remained practically unchanged, making no contribution to the increase in expenditure per capita during the 90's.

25. The use of private health services is relatively low (16 percent of all health services) compared with other countries in the Latin American region. The use of private hospital services is even lower for three main reasons: (i) high service costs (in comparison with those of the public sector) and little payment capacity of the population; (ii) physicians who work both in private practice and in public hospitals refer private patients for care in public hospitals, and levy “under the table” charges for the use of the public

facilities, in exchange for better access and differentiated services for the patient; and (iii) the presence of a universal health insurance system and a well developed public hospital system that guarantee access at no cost for the patient.

26. Access and utilization of health service is highly progressive, indicating the pro-poor benefits of a universal health insurance system and improvements in access obtained through the recent strategies of basic health teams and health areas. Analysis of the CCSS' redistributive impact shows that the utilization of health services is quite uniform by level of income. The lowest income quintile (20 percent) uses 22 percent of the health services, and the bottom 50 percent of the population income distribution uses 56 percent of health resources. If contributions to social security are considered, the results are markedly progressive. Overall, the lowest income quintile pays only 3 percent of total contributions and the lower 50 percent of the income distribution contributes only 18 percent. Despite these favorable results, there are still areas that require improvement. The lowest income groups suffer the greatest gaps, and there is a high correlation between people's education levels and equity indicators. The indicators with greatest inequity problems are: teenage pregnancy, multiparity and other indicators related to a lack of modern methods and understanding of Family Planning.

27. Reducing levels of evasion and late payment, focused mainly on salary under-reporting and non-insurance, is critical to making further improvements in CCSS financing and equity. There are two obstacles to reducing evasion levels: first, the limited development of systems for monitoring and measuring evasion; second, contribution control systems for small and middle-sized companies do not comply with the minimum requirements of technical support. Furthermore, the universal access scheme introduces a disincentive to join mandatory contributory schemes. The absence of control mechanisms introduces problems of adverse selection and "free riders".

28. During the last decade the CCSS has maintained financial equilibrium, even producing an operational surplus in most years. The surplus is generated because real contributions per direct insured person have increased (16 percent), while the real cost per direct insured person has increased relatively slowly; in addition, the number of insured family members per direct insured person decreased rapidly in the nineties. Furthermore, many allege that the surplus is the product of some undesirable cost containment mechanisms, such as waiting lists and "biombos" or illegal charges. In the first case, people who are not willing to wait for the health service they need seek care in the private sector (deflecting part of the demand) and in the second case, direct payments to physicians for medical care function as an informal co-payment, and help contain CCSS expenditures.

29. In the next fifty years the population pyramid will show a large expansion among the elderly population. This, together with changes in the epidemiological profile, will increase the more costly and complex causes of medical visits and hospital expenditures, and lead to escalating costs and real expenditure. The report indicates that financial sustainability in the medium and long term will be strongly determined by real wage levels, the ability to reduce evasion and, finally, by the possibility of controlling the expenditures and improving results—or, in other words, increasing "value for money".

30. The Costa Rican government outlined a general reform of the Health Sector at the beginning of the nineties, in which four priority areas were defined: (i) institutional reorganization; (ii) reform of the financing model, (iii) management modernization; and (iv) a new health care model. The reforms began with the progressive application of a new health care model based on dividing health services into three levels of care. The EBAIS became responsible for primary care coverage for 70 percent of the population and twelve priority health programs were integrated into five Integrated Primary Care Programs. With respect to private health services, the creation of self-managed health cooperatives and the execution of the first public bid for the management of two health areas in the year 2000, are a sign of the advances in the decentralization process and in the application of new resource allocation mechanisms.

31. The Ministry of Health (MOH) and the Caja Costarricense de Seguro Social (CCSS) have made limited progress in implementing institutional restructuring. The MOH has made progress in specializing its functions, but still needs to do much more to develop the function of evaluation of systems and health services, and to consolidate the accreditation function. The CCSS advanced in separating its administrative function, creating a Pensions Vice Presidency and initiating some actions for separating three CCSS functions: financing, purchase and provision of health services. The changes in this area led to the creation of the Health Services Contracting Division and the Superintendence of Health Services. The most important change was the approval of the Law on Decentralization, which establishes the legal framework for greater autonomy and a clearer separation of the financing and purchasing function from the provider function. The 1999 Law was under implementation at the time of the study and promises to introduce important changes throughout the system.

32. The main challenges for further reforms of the health system are: (i) the Ministry of Health needs to consolidate its stewardship role over both the public and private sectors; (ii) the Contracting, or Purchasing, Division needs stronger ties with budgeting and daily financial management, so that planning and purchasing processes can function with a better level of coordination and articulation; furthermore, this division lacks the information technology instruments it needs to fulfill its functions efficiently; (iii) the CCSS requires a complete restructuring at central level to respond to the increasing decentralization in the system, adapt the organizational structure to the changes in the decentralization law and to the separation of functions promoted over the past 5 years; and (iv) the Superintendence lacks the functional and political autonomy needed to comply with its mission. All this prevents efficient provision of high quality health services.

33. Costa Rica needs to continue the reform process started in the early 1990s to reduce waste and improve services by:

- Consolidating the Ministry of Health role as steward and policy maker and strengthening health education and public health programs;
- Consolidating and expanding the health areas and EBAIS. These do not cover the entire population yet, and one of every four Costa Ricans still does not receive the benefits of the new integrated care model. Particular emphasis should be made in the North and South Central areas and in Brunca;
- Improving administrative and budgeting procedures in the CCSS and consolidating the culture of performance agreements with hospitals and other health providers to increase coverage of primary health care, improve efficiency of the system and stimulate improvements in quality;
- Promoting changes in the system to increase management and financial autonomy of health providers in the context of the 1999 Law on Decentralization. Introducing competitive mechanisms within the provider network, such as incentives linked to accreditation, provider reimbursement linked to performance, and more information to the public about relative performance and quality;
- Reducing current disparities in expenditures levels by region which do not favor poor regions. Introducing the new resource allocation model, for which it is necessary to develop information systems in planning and purchasing of health services, establishment allocation priorities by levels of care and programs, establishing a medium-term resource macro-allocation strategy that strengthens the first level of care; and applying resource allocation criteria that are based on management contracts;
- Introducing changes in the pharmaceutical procurement system to produce savings in storage and procurement;

- Strengthening the CCSS collection system and promoting changes in financial information systems; and
- Developing alternative delivery arrangements through public-private partnerships that complement public services offered by the CCSS and gradually introducing managed competition in the healthcare market.

## **Social Protection**

34. In the *pensions* sector, the nineties was a time of important reforms that affect the long-term sustainability of the diverse pension schemes and opened the sector to private participation. The reform processes responded to the financial imbalances faced by public pensions plans, a result of their multiple benefit schemes and low access requirements. The most important public plans are the CCSS's Régimen de Invalidez, Vejez y Muerte (IVM) and the Teachers' Association Régimen de Pensiones y Jubilaciones (RPJMN). The most recent reform to the National Pensions System, the Workers Protection Law, was enacted in 2000, and established a new private pensions system, run by complementary pensions operators and regulated by the Pensions Superintendence.

35. Under the 1992 and 1995 reforms, most of the special pensions programs were eliminated, benefit schemes were unified, and requirements and benefits were rationalized to make some progress to uniformity. The reforms achieved a significant reduction in the actuarial liabilities financed by the Central Government Budget and in the government subsidy needed to cover expenses, even though in the short-term it increased fiscal expenditures to meet acquired rights due to existing beneficiaries.

36. At the end of the nineties approximately 59 percent of the Economically Active Population (EAP) of wage earners were covered by the National Pensions System (SNP). This represents a decrease in coverage from 66 percent at the beginning of the decade; however, the coverage of self-employed workers increased to 27 percent (1999). As a consequence of the maturity level of the IVM Plan, the coverage of beneficiaries by non-contributory programs is much less than coverage by contributory programs, protecting 36 percent of the population aged 60 years or older in the year 2000. It must be pointed out, however, that approximately 35% of the population over 65 years of age is not covered by any benefit.

37. All the plans, contributory and non-contributory, experienced considerable real growth in expenditures during the decade. Between 1993 and 1996 the real growth was 17 percent and 12 percent, respectively, even though the extraordinary growth of 1993 is explained by an electoral cycle phenomenon in which inflation was artificially reduced in that year, leading to some degree of overestimation.

38. The largest pension plan is the CCSS' IVM with 42 percent of total pension expenditures (1999), followed by the Teachers' Association Plan with 33 percent. The Special Contributory Plans represent roughly 17 percent and the non-contributory plans account for between 1 and 2 percent of total pension expenditures. The RNC spends the remaining 7-8 percent. As a share of GDP, total expenditure has remained constant at between 3 and 4 percent during the last 5 years. The IVM administrative expenditures are within acceptable efficiency parameters, even though they have fluctuated during the nineties. Between 1990 and 1999, for every 100 colones contributed by members, on average between 4 and 7 colones were used to finance administrative expenses. These levels of management expenses are considered low in comparison with other pensions plans in the Latin American region whether public or private.

39. The pensions benefits and the replacement rate (the pension amount as a percentage of previous earnings) dropped in the IVM scheme. Moreover, IVM benefits display a slight loss of purchasing power during the nineties. In real terms, the real average pension went from 24 thousand colones in 1990 to 23 thousand colones in 1999, while the average replacement rate dropped from 45 percent to 35 percent during the same time. The coverage and the amounts of the non-contributory pensions do not provide the minimum resources required to protect elderly people from poverty.

40. There is no information available for evaluating the redistributive impact of the SNP, but the analysis of the IVM Plan shows key difficulties arising from: (i) under-reporting of salaries in the early years of contribution in order to minimize contributions, and then over-reporting at the end of the contributions period to inflate the reference income upon which the pension will be based; (ii) calculation pensions based on nominal salaries, which does not favor persons who retire in periods of high inflation rates; (iii) a strong incentive to contribute during the first twenty years when the benefit rate increases 3 percent for every year of contribution, while in the last years the benefit rate drops to 1 percent per year contributed, and (iv) a guaranteed minimum pension for people whose pension would otherwise be less than 60 percent of the minimum contributory salary, which becomes a redistribution mechanism in favor of lower income members. However the redistribution is not totally transparent and the contribution/benefit relation is not based on criteria that guarantee actuarial balance. For Non-Contributory Plans the key problems are insufficient coverage, low pensions sums and pensions granted to individuals who do not belong to the low incomes category and should not be eligible.

41. One of the main challenges is to reduce inequity between workers in the formal sector and those in the informal sector, and, at the same time, increase the real average pension. Estimates show that approximately 35 percent of the population at retirement age does not receive a pension, and that an especially low percentage of people in the lowest income quintile obtain pension benefits.

42. Regarding the System's financial sustainability, the available studies show that the IVM Plan is financially solid in the short and medium terms, but that the demographic transition the country is going through and the SNP maturity process will make it necessary to: (1) increase contribution rates in order to guarantee benefits in the future; (2) increase the period that the Plan's reserves currently cover; and (3) decrease evasion levels using better supervision mechanisms. In other words, there is an actuarial imbalance that will demand future reform. The Teachers' Association Plan two parts, the Distribution and, show different situations; the Distribution Plan has a deficit that will increase with time, and the Capitalization Plans are not sustainable in the long term because of an imbalance between the actuarial values of benefits and contributions. It is calculated that in order to finance the benefits it will be necessary to increase the contribution rate by 2 to 3 percentage points. The financial balance of the Special Plans has remained the same for the last six years due to a governmental subsidy, which has been a constant near-1 percent of GDP, but which has also been constantly increasing in real terms because of the reduction in income and increase in total expenditure (there have been no new contributing members since it was closed down in 1992).

43. The challenges the SNP currently faces make it necessary to direct future reforms toward several objectives:

- (i) Reduce replacement rates and future costs of the public plans, in order to get them to an affordable level and to guarantee their financial sustainability;
- (ii) Expand coverage, improve membership management and control of contributions; increases in the affiliation indices are required, but without deepening the current actuarial imbalances;
- (iii) Improve access to minimum pensions and increase equity in the distribution of those benefits;

- (iv) Revise the severance payment calculation formula. Current redistributive mechanisms must be reviewed and a calculation method must be established that creates more transparency in the contributions/benefits; among other things, expand and index the reference salary, and modify the regulation benefit rate scheme, in order to reduce inequity, contribution evasion and actuarial imbalances;
- (v) Improve access, severance payment and Non-Contributory Plan Management, so that the payments cover the basic needs of all beneficiaries and make the beneficiary qualification process efficient, and;
- (vi) Reduce evasion and salary under-reporting.

44. The *social assistance* programs play a key role in the strategy for reducing poverty by providing social protection and a safety net for the poorest groups. In order to reduce national poverty indices, significant amounts of public resources need to be directed toward these target groups. The idea is not to convert the Government into a permanent provider of subsidies, but into an entity that supplies social services and resources to the most needy so that the government programs help people out of poverty. Thus the policies, spending and results of the social assistance programs should be analyzed in the context of other social sector programs. This is the primary motivation for including social assistance and nutrition as part of the overall social sector analysis. Ultimately, this will lead to a better understanding of how to close some gaps with respect to the social protection of key vulnerable groups as well as to improve the focus, efficiency and monitoring/evaluation of existing programs.

45. FODESAF is the main financing institution for social assistance programs, with a budget of just over 1 percent of GDP. The average real rate of growth from 1990 to 2000 was 8%, with minimal reductions in a few years. One of the main problems FODESAF faces is the limited scope to plan its expenditures, since a big percentage of the budgeted funds is not actually disbursed by the Finance Ministry during the fiscal year. On average, during the 1990-2000 period, only 63% of budgeted funds were in fact disbursed, although this increased to approximately 66% in 1999.

46. In the education sector, there are four social assistance programs that try to ensure equitable access to education: (a) *School Vouchers*, an annual scholarship for tuition (about US\$30 per student) which is granted to the poorest students to cover their expenses at the beginning of the school year; (b) a *Student Transportation* subsidy; (c) *Student Scholarships*, directed toward increasing school attendance among students at risk; and (d) *School Lunch Program*, a school food programs for students.

47. The main problem with these programs is low coverage of the poorest families. In order to improve efficiency and to target the base programs better, a reform project is being developed, called Modernization Project of the Education Equity Program, which will develop ways to channel funds to beneficiaries who really need them. It uses a household database called *Sistema de Identificación de la Población Objetivo* (SIPO), developed by IMAS, which classifies households by poverty criteria and eligibility to receive state subsidies. Other recommendations for solving the problems in this area include: (i) consolidate the school aid programs into one single unit, for more efficient resource allocation; (ii) introduce a reporting component, (iii) establish a coupon system for the school lunch program, and; (iv) establish uniform criteria for the selection of the beneficiaries.

48. In the pensions sector, the main social assistance program is the Non-Contributory Plan (RNC) created in 1974 under “Ley de Desarrollo Social y Asignaciones Familiares”, with the objective of granting economic aid to all persons living in conditions of extreme poverty, who are not protected by any of the current contributory pension plans in the country.

49. According to data obtained from SIPO, in the year 2000 nearly 14,000 persons (approximately 50% of the elderly below the poverty level) were not covered by any pensions plan. This situation is worsened by the low sums provided by the non-contributory pensions, which do not provide adequate economic protection to the poor, especially during old age. The amount of the monthly pension was ¢10,000 in the year 2000 (close to US\$ 33), representing only 20% of the minimum salary or approximately half of the poverty line.

50. Another problem with RNC is that means testing mechanisms are not entirely effective, in some cases granting benefits to individuals who do not have low incomes. Data obtained from the 1998 Household Survey reveal that close to 50% of RNC beneficiaries belong to the first income quintile, a figure that can be improved in future years by more effectively targeting beneficiaries.

51. In the housing sector, social assistance is provided by the Bono Familiar de la Vivienda, a family housing voucher, administered by the Housing Subsidies Fund (FOSUVI). Even though the requirements and specific procedures to apply for this benefit are clear, there seem to be difficulties in defining the target population at the time of making grants.

52. Data in the 1999 Household Survey reveal that a large part of the resources have been directed to families not in the poorest groups in the country. And an analysis of the families that received vouchers more than five years ago, shows persistent levels of poverty for a large proportion of the beneficiaries, which suggests that the program does not seem to provide a way out of poverty.

53. During the first trimester of 2000 a total of 2,491 Family Housing Vouchers were granted, which corresponds to 66 % of the target planned for that trimester. Total transfers by FOSUVI were ¢3,230 million, with an average sum per bond of ¢1.3 million. The Region with least BFV transfers was the Central Pacific with a total of 108 vouchers; however, it is also the Region with the lowest unit cost (¢1.2 million). On the other hand, the Central Region issued the most BFV vouchers (1,241) and the unit cost was ¢1.36 million, the highest of all the regions. This indicates possible problems with geographic equity in the voucher distribution mechanisms, or highly differentiated real access by location of potential beneficiaries.

54. There are many pending problems within the housing sector, among which are the following: (i) given the real housing needs in the country, it is important to put more emphasis on housing conditions and overcrowding. Where repair or enlargements are needed rather than new construction, there needs to be a more intense search for low-cost financing programs in which there is full repayment. (ii) Low income groups should be the beneficiaries of housing subsidies (Housing Voucher). Higher income families should be offered loans with reasonable repayment conditions. (iii) A new, fairer selection method is needed to assign the benefits of these programs to households with the lowest per capita incomes. (iv) Another suggestion is that the vouchers be distributed according to the needs of each region of the country, with the purpose of not cutting off resources to a particular region, for example the Metropolitan Area, and therefore worsening migration, unemployment, and misery in this or any other area in the country.

55. In the nutrition sector, in general terms both the nutrition situation and trends in nutritional status of the infant population have been positive. The Costa Rican government has invested an annual average of \$39 million in its two main nutrition programs over the last decade, equivalent to 0.3% of GDP, 1.5% of public expenditure and 2.5% of social public expenditure. Despite the encouraging spending levels, the impact of these programs on the poorest families is very limited.

56. The principal problem with the nutrition programs is minimal or non-existent targeting of the poorest groups. Use of information systems with data on the target population will enable efficient actions to

relieve nutritional problems. Adequate childhood development through effective programs in the early years will allow individuals to enjoy good health and consequently, to work productively.

57. Estimates from the household survey of the population under 18 years of age show a general coverage of 30% for the School Lunch Program. This coverage reaches a 60% maximum among the school age population. Given the extensive coverage of public primary education in this age group, this suggests that many students do not use the school lunch program. The Comedores Escolares coverage among adolescents is very limited, because of the selective character of the programs in high schools and because of low enrollment in high school education. On the other hand, Centros de Atención Infantil (CAI) coverage is about 10% of the population under seven years old. Even though this estimate is subject to the limitations of the survey, if the program's data are compared with the estimated infant population, coverage is below 20% of children under seven years of age.

58. Expenditure of the two main nutrition programs show opposite trends during the decade. While the Comedores Escolares has grown, with a cumulative increase in total expenditure of 34% in the nineties and 28% per beneficiary, the CAI's real resources per beneficiary have fallen by more than half. So while in 1990 CAI spent more, currently it is the opposite.

59. Considering the equity of the CEN-CINAI program, only 24% of beneficiary children belong to families in the lowest income quintile. CE targeting of beneficiaries could be better, even though almost two out of every three beneficiaries belong to the bottom 40% of the population.

60. Two kinds of problems can be identified in the social protection network. First, there are significant gaps in coverage. A large number of poor children between the ages of 0 and 5 years of age are at high risk of stunting, mainly because of the lack of coverage of integrated child development program at an early age, which have proven of great value for children, parents and society in other countries. Furthermore, a great number of elderly poor (estimated at over 20,000 in 1999) do not benefit from the 68,000 non-contributory pensions the CCSS provided in 1999 more because of high infiltration of non-eligible people into the system, rather than a lack of resources. Second, there is no coordination among programs, which reduces impact, increases administrative costs and creates problems for targeting. Many of the benefits intended for poor people go to people in middle income groups.

61. One of the most important measures taken to improve targeting of social programs toward the neediest groups was the creation of the Objective Population Identification System (SIPO), a system for identifying target populations using the most recent information and technology. The Rodriguez administration has developed a strategy for reducing the current problems in social assistance through five actions:

- (i) An increase in the coverage and focus of Early Childhood Development programs (ECD) for children from 0 to 5 years of age. To do this, it established the "By the Hand" program, with which it aims to create popular awareness of the importance of ECD services, increase coverage of the poorest children and establish efficient information systems that allow the program's target groups to be identified;
- (ii) Increasing the coverage of non-contributory pensions for the elderly poor, using the SIPO to identify elderly people in extreme poverty who have no access to the contributory pensions system and making the pensions grant mechanism more efficient so that it benefit the poorest first;
- (iii) Improving institutional coordination and program efficiency, to avoid duplication and wasted resources. Many programs must be consolidated and uniform selection criteria for diverse programs are needed;

- (iv) Better targeting of social programs to the poorest groups, by using the SIPO database and eliminating ineligible beneficiaries from each of the current programs. Lastly;
- (v) Developing an evaluation and monitoring system, and starting to monitor progress towards reaching the goals set for each social program. Making the results public will improve credibility and accountability of the program's administrators.

62. The collective impact of well financed and well managed social sector programs would contribute to poverty alleviation and reduce its dependence on rapid economic growth. Clearly, improvements should focus on how to improve the impact of existing resources and ensuring that any additional resources that may be allocated to the social sectors are sharply targeted to the poor. The findings outlined in this report are the outcome of a collaborative effort of the Government and the World Bank. The data and analysis in volumes I and II provide quantitative and qualitative evidence of who the poor are, how social spending has contributed to alleviating poverty and where the remaining gaps are in coverage and effectiveness.



## INTRODUCTION

1.1 In Costa Rica, the last review of social sector expenditures by the World Bank in 1990 concentrated on expenditures on social programs for education, health and nutrition, and pensions. It emphasized the distribution of program benefits and other aspects of equity, and analyzed differences across regions and income groups. The report also reviewed expenditure trends and financing issues, and problems in the efficiency of expenditure allocations. The main results and recommendations of the 1990 Public Expenditure Review (PER) were:

- **Education.** The report identified two key challenges: the quality of primary education, and equity and opportunity regarding access. The main policy recommendations were to increase resources for primary education, review the payment system and work incentives for teachers, develop a policy to support bright students from poor families, to provide affordable access to education.
- **Health.** A clear strategy for improving health sector performance was needed. Guidelines on how to improve the quality and financing of health services were outlined. Policy recommendations included: changing the payment mechanism for physicians, providing users with more choice among providers, introducing co-payments to recover part of the costs of care and to regulate demand for services, strengthening clinics and rural health posts, improving nurses' incentives, increasing coordination between the Health Ministry and the Caja Costarricense del Seguro Social, and simplifying the sector's financing mechanism.
- **Social Assistance and Nutrition.** The 1990 PER recommends improving the focus of nutrition programs by selecting beneficiaries better, so as to increase population coverage.
- **Pensions (social security).** The policy changes recommended in 1990 were to increase the retirement age for special plans pensions, and to harmonize the financing, eligibility conditions and benefits of the different plans. The public sector salary structure was reviewed and privatization options were outlined.

1.2 During the nineties, there were marked economic, social and institutional changes in Costa Rica, some of which had important implications for the functioning of social programs. In education, the private sector expanded considerably, while education reforms focused on increases in financing for public education, curriculum improvements, better access to new textbooks, a longer school year, and introducing changes in the teachers' salary policy.

1.3 In the health sector, the integration of Ministry of Health and CCSS activities ended in the mid-nineties, and an ambitious reform project began which is oriented, among other things, toward strengthening the regulatory role of the Health Ministry, changing the health care model, separating the functions of financing, purchasing and supplying health services, and decentralizing the CCSS and modernizing its administration. Under this reform, institutional strengthening is needed to enable the MOH to play its stewardship role in the health sector, and to ensure that other institutions and players understand and respect this role.

1.4 Regarding social security pensions, laws to reform the public sector special pensions plans were passed in 1991, 1992 and 1995, that unified or closed down several plans, modified eligibility requirements and reduced benefit levels. The Social Security Institute approved several regulatory reforms of the general pensions plan, to rationalize its benefits and financing. At the beginning of the year 2000, the Worker Protection Law introduced reforms of the retirement plan, and the Social Security

Constituent Law created a complementary pension plan with defined contributions, under private management.

1.5 This array of reforms makes a new overview of public expenditures in the social sectors important. This will make it possible, among other things, to: (i) evaluate the extent of the reforms; (ii) identify the strengths and weaknesses of the different programs; and (iii) set up a new prioritized agenda for the development of social programs, to guide the external aid strategy for Costa Rica.

1.6 This report includes an evaluation of social expenditures on education, health, pensions, social assistance and nutrition in Costa Rica during the nineties. The basic objective is to assess how social policies have modified the situation since the 1990 evaluation. Aside from providing an overview of the structure and evolution of social expenditures in Costa Rica, the analysis in each sector looks at the composition of expenditures, financing of programs, and performance during the nineties, within the context of institutional and programmatic reforms. In evaluating performance, financing, resource allocation, coverage, equity, internal efficiency, efficacy and financial sustainability are analyzed in each sector. The analysis concludes by examining the main achievements and pending agenda in each sector. It must be highlighted, however, that this document does not outline a strategy for reducing poverty, it simply provides policy makers with an instrument which may be useful for developing an effective poverty reduction policy.

1.7 The editors thank Juan Diego Trejos, Suhas Parandekar, Tarcisio Castañeda and Stephan Brunner for their contributions to various sections.

## MACROECONOMIC AND SOCIAL CONTEXT

2.1 The Costa Rican economy grew faster in the 90s, recovering from the lackluster performance of the 80s. Despite this, the average growth rate (4.5%) did not reach the 5 percent level required to ensure adequate per capita income growth and to support poverty alleviation. A more detailed analysis of growth over the decade reveals that a significant share of growth was generated by manufacturing (23% of total production<sup>1</sup>) and the technology industry from 1998 onwards.<sup>2</sup> Tourism has also driven growth during recent years, overtaking other sectors to become one of the leading sectors contributing to GNP in the last decade (19%).

Figure 1.1. Costa Rica: IMAE behavior, year 2001

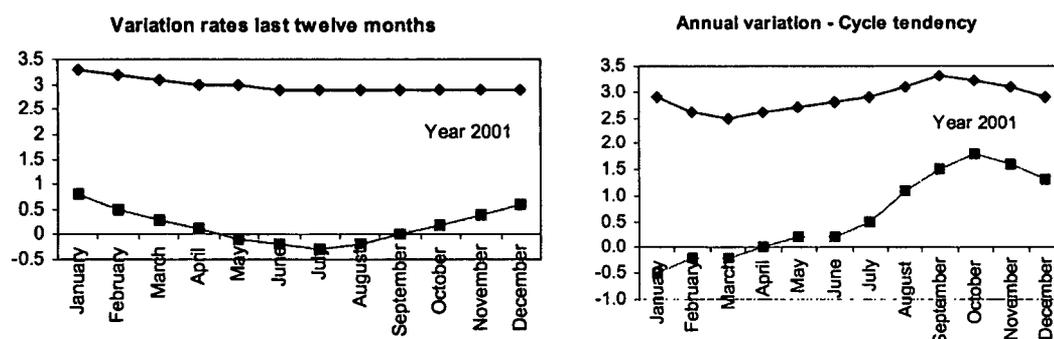


Table 2.1. Costa Rica: Economic indicators (1990, 1996-2001)

Indicators	1990	1996	1997	1998	1999	2000	2001
GDP (% annual growth)	3.5	0.9	5.6	8.4	8.2	2.2	0.3
Inflation (%)	27.2	13.9	11.2	12.4	10.1	10.3	11.0
Open unemployment rate	4.6	6.2	5.7	5.6	6.0	5.2	6.1
Public sector fiscal balance (% GDP)	-2.0	-4.1	-2.5	-2.0	-3.2	-3.8	N.A.
Gross domestic investment (% GDP)	20.9	17.6	19.3	20.5	16.6	17.0	N.A.
Direct foreign investment (% GDP)	2.2	3.6	3.2	4.4	3.9	2.6	2.7
Gross domestic savings (% GDP)	10.8	12.2	13.3	15.3	12.0	11.6	12.0
Current account balance of balance of payments (% GDP)	-7.4	-2.2	-3.8	-3.7	-4.4	-4.7	N.A.
Total domestic debt (% GDP)	17.6	34.5	37.4	34.9	39.0	37.6	37.2
External public debt (% GDP)	42.9	24.1	20.5	20.4	19.3	19.7	19.9
International Monetary Reserves (US\$ Millions)	470.8	926.4	1141.2	991.6	1472.1	1317.7	1379.8

SOURCE: BCCR, IMF, Estado de la Nación, Informe 7.

2.2 The situation changed dramatically in 2000 as the economy was gripped by the worldwide economic downturn. In summary, the stagnation in growth was caused by a combination of several factors: (i) a 35% decrease in INTEL exports due to the crisis in the microprocessors market; and (ii) economic

<sup>1</sup> Average during period 1993 to 1999.

<sup>2</sup> This is the year in which INTEL initiated operations in Costa Rica.

recession in the main industrialized countries. Over the past year, Costa Rica has experienced real growth of only 0.3%, with a notable decrease since 1999 in the per capita GDP (a decline of 2% in the 2000-2001 period).

2.3 Open unemployment was 6 percent on average per year during the 1990s and employment grew at a rate of about 3 percent per annum absorbing the rapidly growing labor force of the 1960 and 1970s. The most dynamic sectors for employment creation have been manufacturing, trade, services and construction. Agriculture has lost jobs in absolute and relative terms: in 1976 agriculture accounted for over 35 percent of total employment, this had fallen to 20 percent by 1999 (GOCR, 2000a).

2.4 Efforts to reduce inflation to single digits have been undermined by fiscal imbalances and fluctuations in the world economy. The overall fiscal deficit (including Central Bank losses) is one of the main outstanding problems of the Costa Rican economy. The fiscal deficit averaged 3.8 percent of GDP over the last decade. Expenditures are highly inflexible (composed mostly of salaries, other recurrent expenditures and debt service payments), and revenues have not increased in step. Thus, governments have had to resort to foreign and domestic borrowing to cover deficits. The internal debt, for instance, increased from about 17 percent of GDP in 1990 to about 37 percent of GDP in 2000; external debt decreased from about 43 percent of GDP in 1990 to 20 percent of GDP in 2000. The fiscal deficit may worsen with the potentially large increments in earmarked expenditures for education resulting from the recent upward revision in GDP figures (the Constitution requires that expenditures in the education sector be equivalent to at least 6 percent of GDP).

2.5 A byproduct of the fiscal pressures is the potential stagnation of social investment and weakening of the institutional structures needed to meet the challenges facing the social sectors. This exacerbates the inflexibility in spending that many social sector institutions face and will limit the possibility of promoting innovative programs. This gives new urgency to the need to dramatically restructure these institutions to ensure that they continue to provide value-for-money.

2.6 In the external sector, the current account deficit decreased from 7 percent to 2 percent of GDP from 1993-1996. During the second half of the decade the deficit increased again, rising to nearly 5 percent of GNP in 2000. During most of the last decade, the country showed a commercial imbalance and the current account deficit caused increasing alarm and pressure on public finance. The Central Bank has tried, throughout the decade, to avoid crisis in the external sector and to maintain a stable level of international reserves.

2.7 Credit to the private sector has gradually increased, parallel to the growth of the private financial sector and the concurrent development of the financial market. After years of privileging industry and agriculture, activities such as trade and services have gained an increased share of bank loans. Interest rates have remained high throughout the decade; during the last five years the average annual passive interest rate has remained at 21 percent, while the active rate was 27 percent. Considering the inflation rates during the period, the real interest rates have been high.

2.8 Social spending in Costa Rica is much higher than in other LAC countries. Total social spending was 18.2 percent of GDP, compared to 14.5 percent for selected other LAC countries in 1996 (the latest year for which comparable information has been assembled). Including social assistance expenditures, social spending is as high as 20 percent of GDP, that is, over five GDP percentage points higher than in most other LAC countries.<sup>3</sup> With the acute fiscal constraint Costa Rica now faces, continued improvements in

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<sup>3</sup> The figures for Costa Rica decrease substantially if the new corrected figures for GDP are used. However, aggregate social spending in Costa Rica continues to be 1-3 percentage points higher than other LAC countries.

social indicators and poverty reduction will have to rely on better use of expenditures, as the scope for further increases in social spending are very limited.

2.9 The high spending levels have allowed Costa Rica to attain important achievements in health and in education. Life expectancy at birth in the last 10 years has remained at close to 76, the infant mortality rate has dropped from 15 to 10.3 per thousand live births, access to drinking water is practically 100%, and illiteracy has dropped to nearly 5% of the population over 12 years old. Despite these advances, Costa Rica has lost ground in the UN human development ranking. In 1990 it was in 28<sup>th</sup> place overall, in 1997 it dropped to 33<sup>rd</sup> and is currently 41<sup>st</sup>. In part, the decline is due to the stagnation in improvements in social sector indicators during the second half of the decade. The high level of spending and the universal

**Table 2.2. Social indicators of Costa Rica and selected Latin American countries. 1997**

Country	GDP per capita (US\$ 1998)	Adult illiteracy rate Male/Fem. (>15 years old)	High School enrollment rate*	Infant mortality rate (x1000)	Infant mortality rate (<5 years old)	Life expectancy at birth
Costa Rica	2,780	5/5	43	12	15	77
Argentina	8,970	3/4	..	22	24	73
Brazil	4,570	16/16	20	34	44	67
Chile	4,810	5/5	58	11	13	75
Guatemala	1,640	26/41	..	43	55	64
Panama	3,080	8/10	..	21	26	74
Mexico	3,970	8/12	51	31	38	72

\* 1996 Figures

SOURCE: The World Bank. Entering the 21st Century. World Development Report 1999/2000.

focus of many of these programs, mask the true effectiveness of these programs in reaching poor and vulnerable groups living in rural areas and city slums. Despite recent growth in the economy, many poor and vulnerable people do not have access to social programs. Finally, the inflexible legal framework that guides social sector budget allocations distributes resources without considering the changing conditions and needs of the poor. Further improvements will require reforms in social spending and programs that aim to reach the poor.

2.10 There has been a drop in the extent of poverty (from 27% of households in 1990 to 19% in 1999), but reductions in poverty and improvements in access to social programs are not linked directly to levels of social spending or to economic growth. Poverty alleviation is multi-faceted, and requires improvements in the efficiency and effectiveness of social programs. This issue is underscored by the fiscal constraints facing the country, which increases the need to improve value-for-money. The report shows that despite increasing spending in nearly all sectors over the second half of the decade, progress in extending coverage and reducing poverty stagnated. New instruments and new approaches will be required that focus on obtaining value for money in social programs.

## STRUCTURE AND EVOLUTION OF SOCIAL EXPENDITURE

3.1 During the nineties, public expenditure increased considerably. Between 1990 and 1999, the consolidated real expenditure of the Central Government increased by nearly 70 percent (Table 3.1), with the greatest spending increases in general basic education, social security pensions and economic services.

**Table 3.1. Costa Rica. General Governments' consolidated expenditure, 1990 - 1999**  
(millions of 1999 colones)

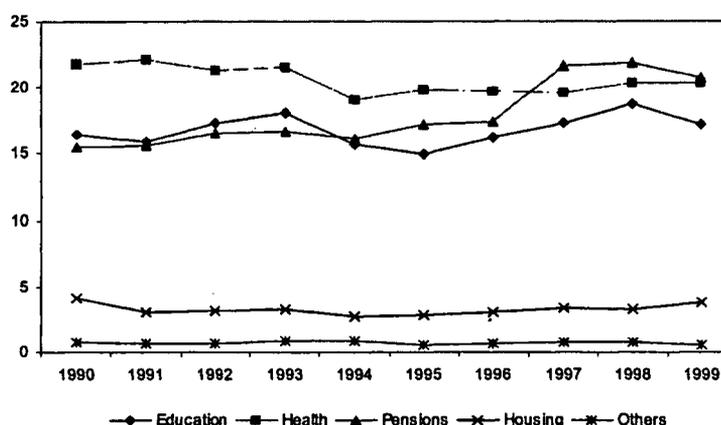
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total Expenditure</b>	<b>595,251</b>	<b>585,488</b>	<b>599,902</b>	<b>665,380</b>	<b>836,345</b>	<b>792,827</b>	<b>834,972</b>	<b>847,361</b>	<b>888,500</b>	<b>1,006,846</b>
<b>General Services</b>	<b>124,405</b>	<b>113,146</b>	<b>107,547</b>	<b>120,485</b>	<b>188,845</b>	<b>138,669</b>	<b>132,261</b>	<b>90,765</b>	<b>96,211</b>	<b>100,522</b>
General Services	87,385	80,028	74,318	80,323	142,657	93,877	84,094	41,057	41,209	38,679
Public Security	37,020	33,118	33,229	40,162	46,188	44,792	48,167	49,708	55,002	61,843
<b>Social Services</b>	<b>348,946</b>	<b>335,345</b>	<b>353,764</b>	<b>401,955</b>	<b>456,090</b>	<b>439,333</b>	<b>476,515</b>	<b>530,856</b>	<b>576,656</b>	<b>629,996</b>
Education	97,901	92,850	104,196	120,014	131,688	118,504	135,920	147,028	166,639	173,301
General Education	57,896	54,542	61,878	75,631	84,432	72,207	88,507	97,074	115,182	122,722
Parauniv. Education	1,067	887	1,017	1,238	1,502	1,473	1,104	1,473	1,690	1,655
Profes. Formation	6,997	5,792	7,385	7,726	7,497	8,862	10,135	10,859	10,794	11,367
University Education	31,941	31,649	33,916	35,419	38,257	35,962	36,174	37,622	38,973	37,557
Health	129,523	129,547	127,632	143,388	159,499	157,230	164,536	166,036	181,012	204,565
<b>Social Protection</b>	<b>92,252</b>	<b>90,947</b>	<b>99,330</b>	<b>110,672</b>	<b>135,191</b>	<b>136,650</b>	<b>145,423</b>	<b>183,260</b>	<b>193,905</b>	<b>208,872</b>
Pensions	68,452	67,092	69,032	76,098	97,076	112,015	114,227	140,771	151,075	162,197
Aid	23,800	23,855	30,298	34,574	38,115	24,635	31,196	42,489	42,830	46,675
Housing	24,503	17,957	18,759	21,832	22,919	22,370	25,098	28,081	28,639	37,676
Other Social Services	4,767	4,044	3,847	6,049	6,793	4,579	5,538	6,451	6,461	5,582
<b>Economic Services</b>	<b>49,093</b>	<b>46,060</b>	<b>53,934</b>	<b>61,626</b>	<b>79,496</b>	<b>62,499</b>	<b>61,753</b>	<b>80,140</b>	<b>87,798</b>	<b>110,998</b>
Power	2,899	3,022	2,868	3,869	4,425	3,637	3,450	13	6	20
Agriculture	15,762	17,478	19,444	22,778	30,478	19,711	12,566	20,976	18,356	21,802
Mineral Resources	-	-	-	-	-	-	-	-	-	-
Transportation	26,899	21,915	27,281	30,523	39,876	34,687	41,094	30,662	32,705	46,035
Economic Services	3,533	3,645	4,341	4,456	4,717	4,464	4,643	28,489	36,731	43,141
Others not classified	72,807	90,937	84,657	81,314	111,914	152,326	164,443	145,600	127,835	165,330

1/ The data for the 1987-1990 period correspond to the connected series of National Accounts, whose results are still preliminary.

SOURCE: JD Trejos based on data from the Ministry of Finance

3.2 Taken together, social sector expenditures increased 80% during the decade, displacing other sectors such as power and general services. The areas that grew least were university and para-university education, vocational education, health and housing. Social sectors expenditure as a percentage of total public expenditure increased from 59% in 1990 to 63% in 1999, although there were fluctuations over the years. Figure 3.1 shows that health expenditure decreased as a percentage of total public expenditure, while expenditure on pensions increased significantly from 1995 onwards. Education expenditures increased slightly beginning in the second half of the last decade, and reversed in 1999. Relative to GDP, general government consolidated expenditures remained relatively stable during the nineties. However, social expenditures increased from 13% of GDP in 1990 to 14% in 1999 (Table 3.2), driven primarily by the rapid real increase in pension expenditure from 1995 onwards.

**Figure 3.1. Costa Rica: social expenditure shares of total government spending, 1990-1999**



Source: JD Trejos based on data from the Ministry of Finance

3.3 The internal composition of social spending changed over the decade. As pension expenditures increased from 19.6 percent to 25.7 percent of total spending, the share of spending on health, housing and social services decreased (Table 3.2). This trend is alarming given the indications that pension expenditures will continue to expand. The following chapters provide an in depth analysis of social spending, and the policies that were implemented in each sector over the last decade.

**Table 3.2. Costa Rica: Social public expenditure as percentage of the GDP and structure, by component, 1990-1999**

Economic Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>As % of GDP</b>										
Total	14.0	13.5	13.2	14.4	14.8	14.1	15.2	15.7	15.5	15.1
Education	3.6	3.5	3.6	3.9	4.0	3.5	4.0	4.0	4.2	4.0
Health <sup>1/</sup>	5.9	5.7	5.4	6.0	5.8	5.8	6.0	5.7	5.5	5.3
Social Security	3.4	3.4	3.5	3.6	4.1	4.0	4.3	5.0	4.9	4.8
Housing	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.9
Other Social Services	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1
<b>As % of social expenditure</b>										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education	28.1	27.7	29.5	29.9	28.9	27.0	28.5	27.7	28.9	27.5
General Education	16.6	16.3	17.5	18.8	18.5	16.4	18.6	18.3	20.0	19.5
Parauniv. Education	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3
Profes. Formation	2.0	1.7	2.1	1.9	1.6	2.0	2.1	2.0	1.9	1.8
University Education	9.2	9.4	9.6	8.8	8.4	8.2	7.6	7.1	6.8	6.0
Health	37.1	38.6	36.1	35.7	35.0	35.8	34.5	31.3	31.4	32.5
Social Security	26.4	27.1	28.1	27.5	29.6	31.1	30.5	34.5	33.6	33.2
Pensions	19.6	20.0	19.5	18.9	21.3	25.5	24.0	26.5	26.2	25.7
Aid	6.8	7.1	8.6	8.6	8.4	5.6	6.5	8.0	7.4	7.4
Housing	7.0	5.4	5.3	5.4	5.0	5.1	5.3	5.3	5.0	6.0
Other Social Services	1.4	1.2	1.1	1.5	1.5	1.0	1.2	1.2	1.1	0.9

<sup>1/</sup> Corresponds to health expenditure estimated in chapter V

SOURCE: author's calculations using data from Juan Diego Trejos



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# **EDUCATION SECTOR**

*Suhas Parandekar*  
*Juan Diego Trejos*



## EDUCATION SECTOR

4.1 The performance of the education sector is one of the key elements in economic and social development. Throughout the last several decades Costa Rica has invested in human capital and achieved education indicators superior to those of the Central American region and comparable to the most developed education systems in Latin America. However, according to the last PNUD human development report Costa Rica has lost ground in education, slipping to number 70. Trends in sector indicators over the decade show that Costa Rica has improved education coverage, principally at primary school level, but continues to face serious problems with respect to equity, education quality and resource allocation. This chapter provides an overview of the education sector, analyzing trends in expenditure and performance. The analysis looks at economic and functional classifications of the education budget, as well as its evolution through time, to give insight into the sector's priorities in improving the delivery of services, and increasing expenditure efficiency and equity. Information is provided on educational development indicators, equity and efficiency within the sector, and the main challenges and policy issues facing the education sector are highlighted.

4.2 High school coverage and completion rates, and the sector's persistent inefficiency are the main issues for the 21<sup>st</sup> century. Although the problems are not equally severe in all regions of the country, the solution will depend on the design of a resource allocation mechanism focused on improving benefits for the poorest population groups, so that education can help alleviate poverty. Through better targeting to poor individuals and improvements in quality, education will pave the way to better paying jobs and provide access to labor market opportunities that will, in the short and medium term, raise incomes and allow the poor to escape the poverty cycle. One of the main aspects to consider is how to achieve a more efficient and targeted use of social expenditures in education, to effectively cover high risk groups.

4.3 The education reform, initiated in 1994 with the creation of the Higher Council on Education and the presentation of the "Education Policy toward the XXI Century" report, emphasized quality and equity improvements. The report correctly points out that improving educational performance is fundamental to the development of human capital. Numerous studies show that a well educated labor force helps provide a competitive advantage in the global economy. Despite the proclamations of this report and repeated efforts by the Ministry of Education, the goal of improved quality and equity in education remains elusive, and a persistent challenge to the sector.

4.4 Costa Rica spends approximately US\$ 600 million of the national budget on education, roughly 4% of GDP and close to one-third of the total Government budget of US\$ 2.1 billion dollars<sup>4</sup>. The Ministry of Public Education (MEP) share of spending is approximately three quarters of the sector budget and the remaining one-fourth goes directly to the *Fondo Especial para la Educación Superior* (Special Fund for Higher Education) and to autonomous education institutions.

4.5 The MEP has identified four key policies that will be explored in greater detail in this chapter: 1) high school education development in order to assure that low economic level youth have equal access to high school education; 2) improving the quality of primary education, with a program called "Excelencia de la educación básica"<sup>5</sup> (basic education excellence); 3) achieving universal coverage of pre-school

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<sup>4</sup> The GDP for 1999 was adjusted upwards by the Central Bank from a previous figure of US\$ 10.15 billion dollars to US\$ 14.06 billion dollars, an increase of almost 40%. Costa Rican law stipulates that a minimum of 6% of GDP must be used in education – the 1999 expenditures of US\$ 627 million dollars constitute 6.2% of the previous GDP, but are way below the estimated revised GDP.

<sup>5</sup> This program was introduced in 100 schools in rural and urban areas that presented high rates of repetition and dropout during the year 2000. The program includes: (i) strengthening of teaching and learning of reading, writing and math skills in first and sixth grades, (ii) more effective use of the new learning techniques, (iii) emphasizing in-

education; 4) renewing and refocusing policies to improve equity, through vouchers and scholarships for needy children, together with the school food programs.

## EDUCATION DEVELOPMENT INDICATORS

### Coverage

4.6 The education system in Costa Rica has an enrollment of 850,000 students at pre-university level, from pre-school programs through high school. An additional 80,000 students are enrolled at the university level. (see Table 4.1).

Table 4.1. Costa Rica: Coverage of the education system, 1999

Level of Education	Official Age	Enrolled	Of which not of official age	Population	Average gross enrollment	Average net enrollment
Pre-school (Maternal Child cycle, Prekinder) <sup>6</sup>	0 to 4.5 years	3,373		393,732	0.86%	0.86%
Pre-school (Kinder)	4.5 to 5.5 years	4,915	-	85,658	5.74%	5.74%
Pre-school (Transition Cycle)	5.5 to 6.5 years	69,679	-	84,917	82.06%	82.06%
Primary	6 to 11 years	535,057	78,266	513,815	104.13%	88.90%
High School	12 to 17 years	235,425	22,984	414,042	56.86%	51.31%
<b>TOTAL</b>	0 to 17 years	848,449		1,492,163	56.86%	

SOURCE: Ministry of Education for enrollment, Population from CELADE, 1999

4.7 When pre-school education figures are classified by age group, it is clear that the first cycle, known as the *Maternal Child Cycle*, which comprises early programs for children up to 5.5 years of age, has very low average coverage. The second cycle, the *Transition Cycle*, from 5.5 to 6.5 years, has an average coverage of over 80 percent. A law enacted in 1997 extended mandatory primary education to the *Transition Cycle*, and is making efforts to expand a pedagogical component to the early childhood programs in the last year of the *Maternal Child* cohort.

4.8 Primary education consists of two cycles of three years each – 1<sup>st</sup> grade officially begins at age 6.5 and 6<sup>th</sup> grade, when finished on time, would be at age 12.5. Coverage for primary education is universal, with an Average Gross Enrollment rate (PBM) of 107 percent. However, there is an important amount of late enrollment of older age students, which results in an Average Net Enrollment (PNM) of less than 90 percent. The first three years of high school (grades 7 to 9) are known as the third and last

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service teachers' training, (iv) establishing information laboratories in 45 of these schools, and; (v) strengthening community and parental participation in school matters.

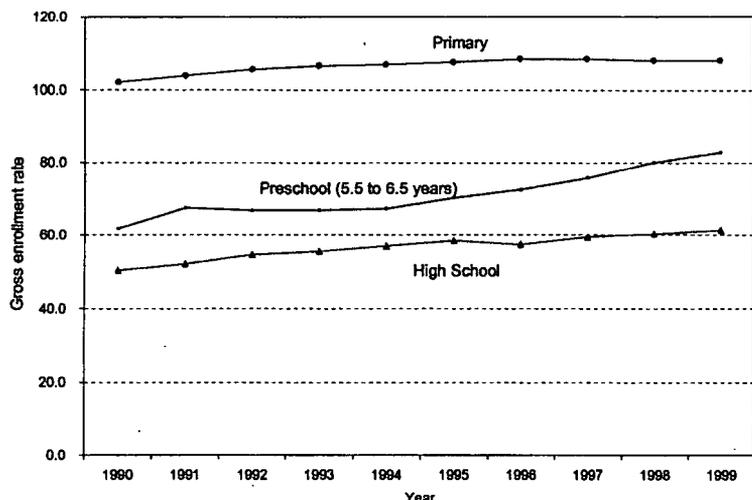
<sup>6</sup> The number of children under five years of age in preschool programs is not easy to calculate accurately. According to the statistics of the program "De la Mano", there used to be 31,000 children between the ages of 0 to 5 years registered, including 18,200 children registered through the program CEN-CINAI, and 6,600 in the program of "Hogares Comunitarios". Even including all of these, with a population of approximately 500,000 children, preschool enrollment for children under 5.5 years of age would still be around 6%. One of the reasons for the low enrollment is that private institutions for children are scarce (accounting for approximately 20% of preschool enrollment) due to the high cost of care of children of young age. It is clear that there should be more incentives to promote the development of private institutions, since although the costs are high, experts estimate that the return on investments is also reasonably high and may vary from 8% to 9%.

cycle of Basic Education. The upper grades of high school (grades 10 to 12) are known as *Diversified Education*. The enrollment rates for high school in 1999 were approximately 61.2% (gross enrollment, PBM)<sup>7</sup> and 49% (net enrollment, PNM).

### Time trends in education coverage

4.9 Primary education coverage in Costa Rica has been complete since the end of the eighties, as indicated in Figure 4.1<sup>8</sup>. High school coverage has shown progress since 1990, but there is still a gap compared to primary education. Pre-school education (5.5 to 6.5 years of age) has had the fastest increase in the last 10 years, which has caused the PBM for pre-school children to increase from 62% in 1990 to nearly 83% in 1999. Appendix 4.2 and Tables 4.1 to 4.3 show details of the enrollment evolution by level of education.

Figure 4.1. Costa Rica: Gross Enrollment Rate Trends, 1990-1999



SOURCE: Ministry of Education

Net enrollment rates for high school show a continuous increase since 1990, while primary level rates have suffered a drop starting in 1996. This figure is not alarming since it is a small drop (2 percentage points), is a fall in enrollment percentage and not in absolute numbers and may be due to an increase in the number of adolescents enrolling in high school at an earlier age<sup>9</sup>.

4.10 Table 4.2 points to three key issues in pre-school enrollment of children 5 and 6 years old, based on the results of household surveys: a) enrollment in pre-school is biased toward high income

groups – during the second half of the 90s enrollment of children 5 years old in the lowest income quartile was 50% less than for children of this age in the highest income quartile; furthermore, enrollment grew much faster in the top quartile than in the bottom; b) enrollment is biased toward urban areas, and even though the gap has been reduced, the problem persists, especially for 5-year-old children. Table 4.2 also shows regional differences; and c) there is no gender bias in enrollment rates.

<sup>7</sup> Data published in the VII Informe sobre el Estado de la Nación show a slight increase in the gross high school enrollment rate to a figure near 65%.

<sup>8</sup> The chart does not show the trends before 1990. However, it is important to point out that the economic crisis of the 70's and 80's had a negative impact on average enrollment levels in primary and high school. In fact, it was not until the end of the 80's and beginning of the 90's that enrollment recovered to its pre-crisis level.

<sup>9</sup> Hernández, Luis C. 2001. Mimeo.

**Table 4.2. Costa Rica Pre-school Enrollment**  
*(percentage of the population of 5 and 6 year-olds attending  
an educational program, 1990, 1995, and 1999)*

Indicators	Of 5 year-olds			Of 6 year-olds		
	1990 <sup>a</sup>	1995	1999	1990 <sup>a</sup>	1995	1999
Total Country	6.7	30.8	34.6	45.0	81.6	87.6
Income stratum <sup>1</sup>						
Quartile 1	4.8	24.3	28.7	34.0	71.2	77.1
Quartile 2	8.1	30.2	33.0	47.9	83.0	91.2
Quartile 3	9.2	36.6	37.2	43.5	88.5	96.3
Quartile 4	3.2	36.6	45.8	62.4	92.4	98.0
Region						
Metropolitan Area	9.0	36.0	40.3	56.8	94.3	94.9
Central Urban Region	4.6	47.3	43.3	52.7	98.0	96.7
Central Rural Region	3.8	30.1	34.4	46.3	83.2	93.3
Chorotega Region	7.8	27.1	27.9	44.0	73.0	76.5
Central Pacific	14.4	24.8	33.4	31.7	71.9	87.7
Brunca Region	6.6	16.8	21.6	30.3	66.9	75.8
Atlantic Region	5.1	28.4	30.9	31.3	75.6	80.2
Northern Region	8.4	28.5	22.4	39.0	63.6	66.7
Zone						
Urban	8.1	38.2	39.9	53.4	94.1	94.2
Rural	5.4	25.4	28.2	37.4	72.1	81.6
Gender						
Male	5.6	31.1	33.7	46.4	82.3	87.6
Female	7.7	30.4	34.6	43.4	80.6	87.4

a/ The 1990 Household Survey did not adequately register pre-school attendance.

1/ Quartile 1 includes the 25% of families with the lowest per capita family income.

SOURCE: JD Trejos based on the Multiple Purpose Household Survey.

4.11 A similar table for the primary level shows no important differences across income quartiles, regions or urban and rural areas (Appendix Table 4.2). Given universal coverage of primary education, focus must be placed on other issues besides coverage, such as teaching and learning efficiency and quality. An important fact that must be emphasized is that the lowest income quintile includes the greatest number of children in primary education and sends a greater number of students to school who are outside the official age range.<sup>10</sup>

4.12 The situation regarding high school education is more regressive. The highest income quintile has the greatest number of students enrolled in high school, enrollment of students aged 16 to 18 years is 72 percent in the richest quintile versus 38 percent in the poorest quintile. The urban-rural differential is significant with urban children almost twice as likely to be enrolled in high school as rural children. Over-age students (over 17 years old) are a significant fraction of all students enrolled in high school.

4.13 The Household Survey data (Table 4.3) show that almost half of the youth aged 16 to 18 years do not attend school. In addition, an important proportion of young people in this age group are not in the labor market, very possibly due to lack of adequate work opportunities, and a lack of required labor skills. While increases in coverage have been greatest for the lowest income groups, considerable gaps remains

<sup>10</sup> Hernández, Luis C. Op.cit.

across income groups. Among the older age group, the table shows that only 38% of the lowest income quartile is enrolled in school and that only 39% of young people in rural areas are enrolled.

4.14 An alternate hypothesis to explain this low attendance is that adolescents have serious problems with the type of education being offered, reflected by high levels of repetition and dropouts from the education system.<sup>11</sup>

**Table 4.3. Costa Rica: a detailed look at high school enrollment**  
(percentage of the population from 13 to 18 years old in education system high schools: 1990, 1995 and 1999)

Indicators	From 13 to 15 years old			From 16 to 18 years old		
	1990	1995	1999	1990	1995	1999
Total Country	65.4	75.3	74.9	41.5	49.0	53.0
Income stratum <sup>1</sup>						
Quartile 1	53.3	67.8	66.8	30.2	38.1	38.0
Quartile 2	63.7	73.4	71.4	36.3	38.9	49.4
Quartile 3	68.5	78.1	77.6	42.8	48.1	55.5
Quartile 4	88.8	90.8	92.4	66.4	74.7	72.6
Region						
Metropolitan Area	82.2	88.7	84.3	64.6	59.2	67.5
Central Urban Region	77.3	86.9	86.8	55.5	67.2	71.5
Central Rural Region	55.5	66.3	67.1	28.0	35.5	44.2
Chorotega Region	64.3	71.4	75.7	30.2	44.6	51.9
Central Pacific	57.8	68.0	68.1	33.1	39.2	40.2
Brunca Region	49.8	67.6	67.7	27.7	43.6	37.1
Atlantic Region	55.8	69.0	66.4	33.2	39.4	37.3
Northern Region	48.6	60.1	61.2	24.1	41.3	40.5
Zone						
Urban	79.9	86.5	84.4	58.7	61.2	65.1
Rural	51.2	64.4	64.5	25.5	35.3	38.8
Gender						
Male	66.3	73.5	74.1	42.9	45.1	48.8
Female	64.4	77.1	75.0	40.1	52.7	56.7

<sup>1/</sup> According to per capita family income, quartile 1 includes 25% of the lowest per capita income families.

Source: JD Trejos based on the INEC Multiple Purpose Household Survey

4.15 It is clear that if Costa Rica wants to improve the education level of the work force, it will have to make a great effort to reach young adults living in rural areas, where it is possible to build more traditional high schools. There is a wide range of non-traditional alternative forms of education that may increase the performance of the education sector at high school level. The range of programs includes: (i) high school tele-programs, where the use of a traditional means of communication like television can take education to distant and low resource areas; (ii) distance education programs, such as those widely offered by Universidad Estatal a Distancia, a leading institution in this field that can help develop alternatives at this education level; (iii) tutorial programs and, (iv) virtual schools, that use internet and e-mail.

<sup>11</sup> Hernández, Luis C. Op.cit.

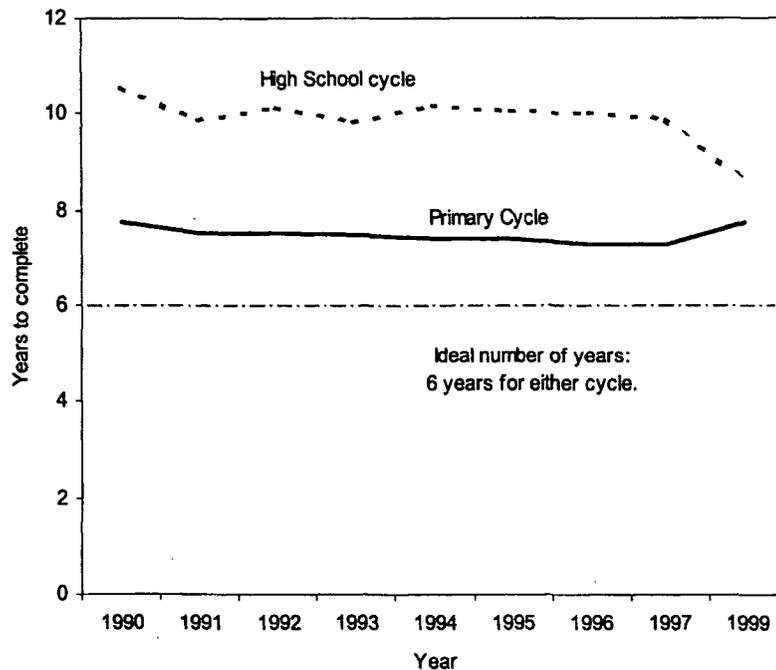
## INTERNAL EFFICIENCY INDICATORS

4.16 The Costa Rican education system suffers from internal inefficiencies at basic and high school levels. Until 1997, the latest year for which figures are available, an average of 7.74 years were necessary to complete the 6 years of primary education, and 8.6 years to complete the 6 years of high school education (Figure 4.2). A common inefficiency measure is grade repetition. Seventy seven percent (77%) of primary school graduates in 1990 had repeated at least one grade in the six previous years and by 1999 the figure had increased to 79%. For high school, the respective figures were 42% in 1990 and 48% in 1999 (see details in Appendix Table 4.3) – the figures are lower for high school due to a greater number of dropouts at this level. The denominator for these calculations includes students who graduated without repeating a single year and those who abandoned school.

4.17 Inefficiency in an education system is evident in high rates of repetition and dropout. The age at first-time enrollment in first grade is also an important indicator of inefficiency – the greater the age distribution at the beginning, the greater the possibility that some

students will not go on to the following grade. High repetition rates exacerbate the problem, since teachers find it more difficult to teach a group students of different ages. Students who repeat a grade more than once, or who intermittently repeat grades throughout their schooling are at greatest risk of abandoning their studies. While permanent desertion from primary school is not a serious problem in Costa Rica, low high school enrollment may be connected with inefficiency problems at the primary school level. To make matters worse, inefficiency affects predominantly the lowest socio-economic groups, creating important barriers to social equity.

**Figure 4.2. Years Required to Complete, by Education Level, 1990-1999**



Note: The data from 1991 to 1997 are not strictly comparable with the 1990 and 1999 data since the former do not include dropouts in the last year. Estimated from reconstructed school cohorts.  
SOURCE: MEP Statistics Department

**Table 4.4. Costa Rica: Initial enrollment in the first grade of primary school, by student's age, 1990, 1995 and 1999.**

Age	Number of Students			Relative structure		
	1990 <sup>a</sup>	1995	1999	1990	1995	1999
<i>Total</i>	94,066	104,128	103,331	100.0	100.0	100.0
5	0	0	101	0.0	0.0	0.1
6	29,488	44,901	50,362	31.3	43.1	48.7
7	47,033	41,007	37,401	50.0	39.4	36.2
8	11,551	12,066	9,772	12.3	11.6	9.5
9	3,763	3,764	3,243	4.0	3.6	3.1
10	1,411	1,516	1,353	1.5	1.5	1.3
11	376	415	564	0.4	0.4	0.5
12	282	295	318	0.3	0.3	0.3
13	75	87	126	0.1	0.1	0.1
14	47	44	60	0.1	0.0	0.1
15	38	33	17	0.0	0.0	0.0
16	0	0	5	0.0	0.0	0.0
17	0	0	3	0.0	0.0	0.0
18	0	0	1	0.0	0.0	0.0
19 +	0	0	5	0.0	0.0	0.0

a/ The age for primary enrollment in 1990 was 7 years of age, after 1994 it was modified to between 6 and 7 years of age.

SOURCE: MEP Statistics Department

4.18 The official age for starting the first grade of primary school is 6 years and 6 months by the end of February of the school year (which runs from February to November). The age limit is flexibly adjusted downward to 6 years and 3 months, and there is no upward limit. Before 1994, children had to be 7 years old to enroll in primary school, so students who enrolled in or after 1994 are younger than the students who enrolled before 1994. Table 4.4 shows that close to 85% of children enrolled in primary school were 6 or 7 years old. Approximately 15% of enrolled students were older, but these are possibly students who had to repeat first grade<sup>12</sup>. It is probable that the efficient flow of students enrolling in primary school is due to the high coverage of pre-school, and expansion in pre-school coverage will continue to generate efficiency in the first stage of the primary school cycle.

<sup>12</sup> One of the reasons why dropout and repetition are serious problems in Costa Rica's education system is because of the low capability and follow-up of parents with respect to their children's education. Also, children who repeat early grades lack basic skills that they should have developed in pre-school, that foreshadow their failure at higher levels. Policies to reduce inefficiency therefore must start with greater involvement of parents in the educational development of their children.

**Table 4.5. Costa Rica, Repetition rate by grade and level, 1990-1999**  
(repeating students as a percentage of the initial enrollment for each year)

Level and Grade	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total I and II Cycle</b>	<b>11.3</b>	<b>10.5</b>	<b>9.6</b>	<b>8.1</b>	<b>8.7</b>	<b>9.3</b>	<b>11.4</b>	<b>10.1</b>	<b>10.0</b>	<b>9.5</b>
<b>I Cycle</b>	<b>14.7</b>	<b>13.7</b>	<b>12.7</b>	<b>11.1</b>	<b>11.9</b>	<b>12.6</b>	<b>14.5</b>	<b>12.8</b>	<b>12.4</b>	<b>11.8</b>
1°	19.0	17.3	17.4	17.2	17.7	17.8	18.6	17.4	17.0	16.0
2°	13.1	12.3	10.3	8.4	9.9	10.4	12.7	10.8	10.7	10.4
3°	11.1	10.3	8.8	6.3	7.1	8.6	11.3	9.4	8.9	8.6
<b>II Cycle</b>	<b>6.6</b>	<b>6.2</b>	<b>5.3</b>	<b>4.0</b>	<b>4.5</b>	<b>5.3</b>	<b>7.6</b>	<b>6.9</b>	<b>7.2</b>	<b>6.7</b>
4°	9.6	9.3	8.1	6.1	6.7	8.0	11.8	10.7	11.0	9.8
5°	7.6	7.1	6.1	4.5	5.3	6.0	8.5	7.9	8.3	8.1
6°	1.4	1.2	0.7	0.8	0.8	0.7	1.0	0.9	0.9	1.1
<b>III Cycle</b>	<b>11.5</b>	<b>12.0</b>	<b>9.5</b>	<b>11.7</b>	<b>10.7</b>	<b>12.3</b>	<b>13.0</b>	<b>13.0</b>	<b>12.4</b>	<b>12.4</b>
7°	14.2	15.0	11.8	13.6	13.4	15.2	16.8	16.1	16.2	16.4
8°	10.5	11.0	9.3	11.5	9.4	11.4	11.3	11.7	10.6	10.8
9°	7.3	7.3	5.4	8.1	6.4	7.5	7.2	7.9	6.4	5.8
<b>Diversified Education</b>	<b>7.4</b>	<b>7.9</b>	<b>6.9</b>	<b>6.3</b>	<b>5.2</b>	<b>6.8</b>	<b>7.2</b>	<b>6.4</b>	<b>6.5</b>	<b>5.5</b>
10°	11.0	11.8	9.9	9.8	8.6	10.5	10.8	9.9	10.5	9.1
11°	3.5	3.6	3.4	2.4	1.3	2.8	3.3	2.7	2.1	1.4
12°	1.1	1.0	1.4	0.7	0.2	0.1	0.8	2.0	1.2	0.7

Source: MEP Statistics Department

4.19 Repetition is particularly high at the beginning of each cycle. In 1999, repetition in the 1<sup>st</sup> and 7<sup>th</sup> grades was 16 percent. Table 4.5 shows that average repetition rates have declined slowly from 1990 to 1999. Decreasing repetition has a great impact since it reduces costs and frees resources that can be used to improve the equity of quality and coverage (see appendix Tables 4.4A and 4.4B). Using an approximate calculation of unit expenditures per student of US\$ 424 per year, the 50,000 repeaters in the system represent a cost of US\$21.2 million, approximately 10% of the primary school education budget.

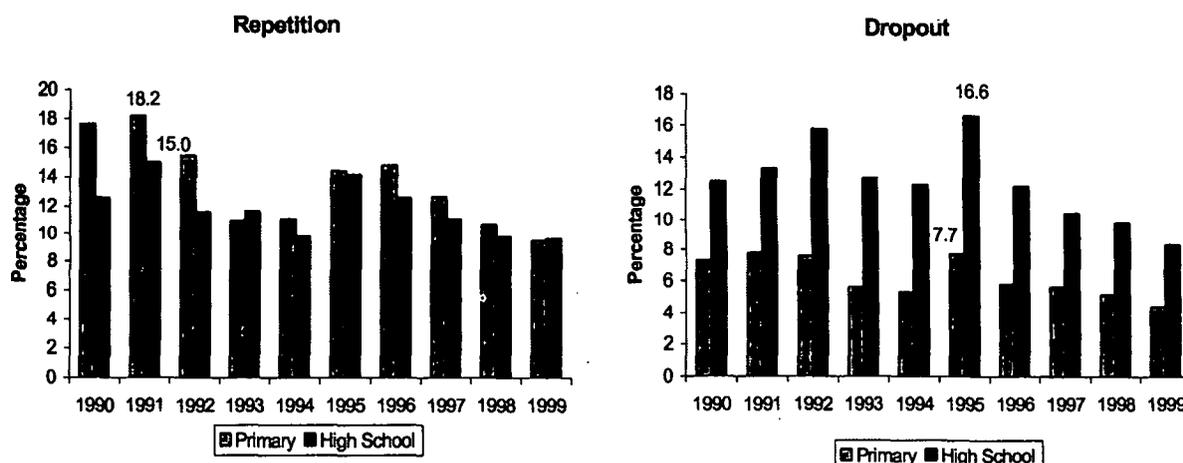
4.20 The equivalent figures for the high school level are a unit cost of US\$ 672 per year with 22,000 repeaters, which amounts to US\$ 14.8 million, or approximately 10% of the high school education budget (see Figure 4.3). The figures reveal that there is a very little real downward trend in these repetition costs. Though there were reductions in the 1997-1999 period, they only achieved a return to the levels in 1994 and do not represent a real decrease. Given the high economic and social costs of repetition and dropout and their practically endemic character in the education system, the government of Costa Rica should establish an adequate policy to resolve these problems, which would free up resources which could be used to improve the system's quality and performance.

**Table 4.6. Costa Rica: Intra-annual dropout rates by year studied and dependency. 1990-1999.**  
(Intra- annual dropout as percentage of the initial enrollment)

School year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>TOTAL PRIMARY</b>	<b>4.7</b>	<b>4.5</b>	<b>4.6</b>	<b>4.1</b>	<b>4.2</b>	<b>5.0</b>	<b>4.5</b>	<b>4.5</b>	<b>4.9</b>	<b>4.4</b>
<b>I Cycle</b>	<b>5.3</b>	<b>5.1</b>	<b>5.2</b>	<b>4.7</b>	<b>4.8</b>	<b>5.7</b>	<b>5.1</b>	<b>5.1</b>	<b>5.4</b>	<b>5.0</b>
1°	6.8	6.6	6.4	6.1	6.3	7.2	6.4	6.5	6.8	6.6
2°	4.9	4.3	4.5	4.0	4.4	5.0	4.5	4.7	5.0	4.6
3°	4.0	3.8	4.2	3.5	3.4	4.5	4.0	3.9	4.1	3.8
<b>II Cycle</b>	<b>3.8</b>	<b>3.7</b>	<b>3.9</b>	<b>3.4</b>	<b>3.4</b>	<b>4.2</b>	<b>3.8</b>	<b>3.8</b>	<b>4.3</b>	<b>3.6</b>
4°	3.9	4.0	4.2	3.6	3.8	4.6	4.2	4.3	5.0	3.9
5°	4.2	4.0	4.0	3.9	3.6	4.1	4.0	3.9	4.3	4.0
6°	3.1	2.9	3.5	2.8	2.7	3.6	2.9	3.0	3.3	2.9
<b>TOTAL DAY HIGH SCHOOL</b>	<b>10.3</b>	<b>9.6</b>	<b>11.9</b>	<b>11.1</b>	<b>11.6</b>	<b>12.7</b>	<b>11.0</b>	<b>10.8</b>	<b>10.9</b>	<b>9.2</b>
<b>III Cycle</b>	<b>11.4</b>	<b>10.6</b>	<b>13.3</b>	<b>12.7</b>	<b>13.1</b>	<b>14.3</b>	<b>12.9</b>	<b>13.0</b>	<b>12.9</b>	<b>10.8</b>
7°	17.5	17.0	19.3	19.2	20.4	21.8	20.3	19.9	19.8	17.1
8°	6.9	6.1	9.1	7.7	7.4	8.8	6.8	7.5	7.4	6.0
9°	4.6	4.1	6.9	5.5	5.1	5.7	5.2	5.2	4.8	4.0
<b>Diversified Education</b>	<b>7.5</b>	<b>6.9</b>	<b>8.3</b>	<b>7.0</b>	<b>7.4</b>	<b>8.3</b>	<b>6.1</b>	<b>5.0</b>	<b>5.5</b>	<b>4.9</b>
10°	10.0	9.5	10.9	8.8	10.0	11.6	8.8	7.0	8.0	6.9
11°	4.3	4.0	5.3	4.7	4.2	4.9	3.0	3.1	2.5	6.9
12°	4.7	3.0	4.7	5.2	4.7	1.4	2.4	1.3	3.9	2.3

Source: MEP Statistics Department.

**Figure 4.3. Repetition and dropout costs as percentage of the education budget**



4.21 The statistical dropout averages calculated by MEP are intra-annual dropout averages – they are the difference between initial enrollment and final enrollment, expressed as a percentage of the initial enrollment. The students that abandon their studies at mid-year will possibly enroll the following year, at least at the primary level.<sup>13</sup> The dropout percentage represents an additional loss of resources, and is linked to the repetition problem. Table 4.6 provides a general view of the dropout averages per grade

<sup>13</sup> When analyzed, the Household Survey will provide definite data on the number of children who abandon school and do not enroll again. Nonetheless, the information presented here is valid, since there is almost universal primary education enrollment in Costa Rica.

level. The 23,000 drop outs at the primary school level and the 19,000 dropouts at high school level implied a public finance burden of around US\$23 million in the year 1999 (Figure 4.3). This calculation does not consider that the dropout cost represents only one year, the one in which the deserter appears registered in the education statistics (see Appendix Tables 4.5A-4.5D).

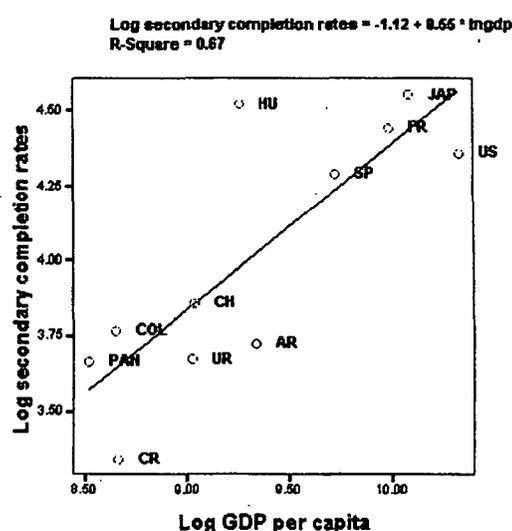
4.22 Costa Rica's weak performance in secondary completion rates is highlighted by cross-country comparisons with OECD and Latin American Countries. Table 4.7 shows that secondary completion rates in Costa Rica are nearly 50 percent below Latin American leaders such as Chile and Colombia and only one third as high as Japan and Hungary. The companion graph shows that even if a logarithmic regression of completion rates on income is used to adjust for income level, Costa Rica still ranks far below the expected value for its income level.

Table 4.7. Comparative Completion Rates

Countries	Secondary Completion Rates	GDP per cap-PPP
Costa Rica	28.3	5,770
France	85.0	21,897
Hungary	91.9	10,479
Japan	94.9	24,041
Spain	73.0	16,730
United States	78.2	30,600
Argentina	41.5	11,324
Chile <sup>1/</sup>	47.4	8,370
Colombia	43.2	5,709
Panamá	39.1	5,016
Uruguay	39.4	8,280

1/ Data 1998

SOURCE: Education at a Glance 2001, OECD and  
Panorama Social de América Latina 2000-2001, CEPAL



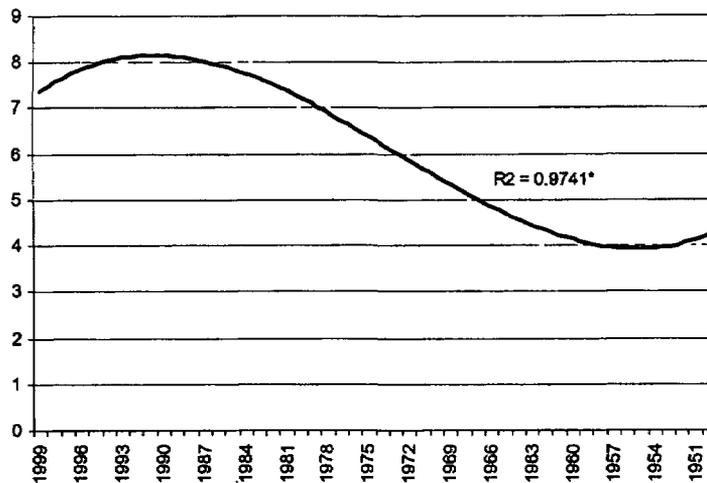
### EDUCATION AND THE LABOR MARKET

4.23 This section includes a short discussion of trends in educational achievement levels of the work force and of salary differentials across different education levels, yielding information on education's private and social benefits. The section also provides a detailed analysis of salary inequities that result from different education levels and discusses inequities in education and labor market opportunities for young adults in Costa Rica.

4.24 Figure 4.4 shows trends in education achievement (grades completed) for each age category. Appendix Tables 4.6A and 4.6B provide details including sample sizes and population data, as well as a measure of the distribution of the average grade achieved, using data from the Household Survey. These tables show that on average, persons aged 25 years have received 8 years of schooling. Because education policy makers in Costa Rica are concerned with increasing workers' levels of education in order to attain a more modernized economy, it is clear that the emphasis on policies for *Diversified Education* are more than justified. An increase in coverage of grades 10-12, including efforts to include children who would otherwise not finish their education, would increase average achievement levels.

4.25 The data for younger people raise concerns about regional variations in education achievement and income differentials. Table 4.8 shows that 76% of 14 year old youths have completed primary education. It is important to point out the presence of differences across income quartiles – 62% of children in the lowest income quartile have completed primary education, compared to 92% in the highest income quartile. The differences at higher education levels are even more severe. One factor that may contribute to the low figures for the poorest families is the high opportunity cost of foregone labor opportunities (only 36 percent of children in the poorest families study full-time versus 70 percent of high income families).

Figure 4.4. Average last school year passed by persons 25 years old. 1950-1999



\*Estimated trend line for a third degree polynomial.

4.26 The curricula for primary and high school do not match the needs of the current labor market, so a large percentage of people (mainly in the lowest income group) drop out of the formal education system and find employment (principally in the informal sector).<sup>14</sup> An increase in the number of teenage mothers (of high school education age) has made the problem worse. Many teenage mothers do not return to the education system and, many of those who do return, do not manage to finish their schooling.

<sup>14</sup> This becomes a vicious circle, since the need for more family income leads to a search for work (poverty increases dropout rates), and then they end up working in badly paid jobs (dropping out again contributes to poverty). One possible solution is to design a new incentives scheme that would motivate people to stay in school. A scheme of this type has been developed in some schools in the United States, where for each level passed, individuals accumulate cash prizes that are delivered at graduation time.

**Table 4.8. Costa Rica: Population completing education, 1990, 1995 and 1999**

Indicators	% finish primary <sup>1</sup>			% finish basic education <sup>2</sup>			% finish secondary <sup>3</sup>		
	1990	1995	1999	1990	1995	1999	1990	1995	1999
<b>Total Country</b>	77.4	79.0	76.4	37.3	44.2	44.1	26.6	30.4	32.7
<b>Income level<sup>4</sup></b>									
Quartile 1	62.3	73.4	62.1	22.3	34.1	23.5	11.6	13.7	15.0
Quartile 2	78.7	76.3	79.9	27.6	31.6	37.2	10.7	16.1	18.4
Quartile 3	89.0	80.3	81.4	42.9	44.1	41.8	27.2	31.6	28.3
Quartile 4	90.6	93.1	92.4	66.7	74.8	68.9	49.6	42.2	59.3
<b>Region</b>									
Metropolitan Area	88.3	85.7	78.2	59.5	54.8	59.4	42.4	41.8	48.6
Urban Central Area	89.8	85.7	87.8	55.8	63.9	69.6	37.1	43.8	48.5
Rural Central Region	81.6	78.2	80.9	24.8	31.4	36.0	21.3	27.6	27.8
Chorotega Region	68.8	79.7	70.3	28.1	43.1	33.2	20.3	30.0	27.6
Central Pacific	71.8	74.1	71.8	30.3	35.9	26.2	15.3	20.1	14.7
Brunca Region	64.9	72.3	64.5	22.7	36.8	26.5	17.7	12.1	19.8
Atlantic Region	59.6	65.2	65.0	17.6	33.7	28.2	10.4	15.0	7.0
North Region	58.0	74.6	66.8	9.5	32.9	37.4	14.7	13.7	10.5
<b>Zone</b>									
Urban	86.9	84.6	81.6	55.0	56.1	57.9	37.4	39.9	43.7
Rural	69.1	73.6	69.9	19.6	31.1	29.0	16.2	20.4	20.2
<b>Sex</b>									
Male	76.8	75.0	75.4	38.2	42.1	38.3	22.9	25.5	28.0
Female	78.2	83.6	76.5	36.3	46.2	49.4	30.0	35.6	36.1

1/ Percentage of the population of 14 years with 6 or more education years approved

2/ Percentage of the population of 18 years with 9 or more education years approved

3/ Percentage of the population of 20 years with 11 or more education years approved

4/ According to per capita domestic income. Quartile 1 includes the 25% of the families with the lowest per capita incomes

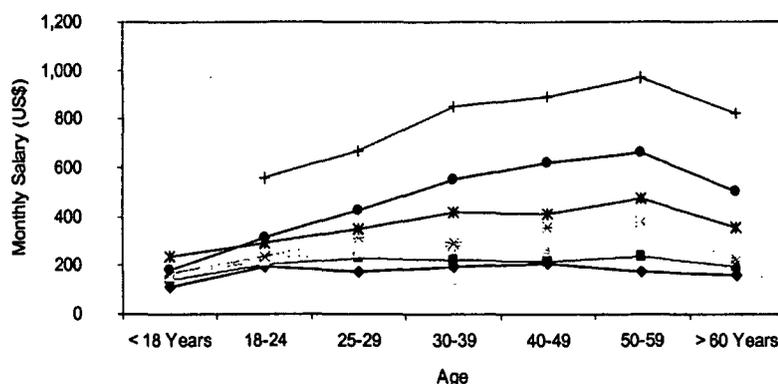
SOURCE: JD Trejos, based on the Household Survey of the Statistics National Institute

4.27 Only one third of 20 year old Costa Rican youths have completed high school education. The differences are even more acute across regions and income quartiles. Only 15% of 20 year olds from the lowest income quartile have completed 12 years of education, whereas the proportion is close to 60%, or 4 times higher for the highest income quartile. From the standpoint of educational policies, the Government needs to find ways to attract young people from the lowest income groups and retain them throughout high school. The figures for rural areas are half those for urban areas, which implies that by the age of 20, few rural youths have had the opportunity to migrate to an urban area to acquire an education. Besides granting scholarships, the government must actively facilitate transportation for those who live far from a city, and exploit new ideas on distance education opportunities. At each level of education, particularly in *Basic Education*, girls consistently obtain better results than boys. This might be in part the result of the interaction between education and the labor market, but a more in-depth analysis will be necessary before the policy implications of this are clear.

4.28 The average monthly salary for a person with a university education is close to \$US 800, four times higher than for a person with no education. Figure 4.5 shows the earnings profile by age and by education level. The figure for those with primary school education is \$US 250 and for those with high school \$US 375. Having a primary school education is associated with an increase of \$US 50 per month over the salary of those with no education, while a high school education means another \$US 125 increase over those with a primary education. These imply large private benefits for students who continue their high school education.

4.29 Estimates based on the Theil-L inequity measure show that education is responsible for one-third of the reduction in income inequity in Costa Rica. The Theil-L inequity measure allows us to break down the levels and changes in inequity due to factors such as gender, age, education, type of employment and place of residence (urban or rural). The Theil-L inequity measure<sup>15</sup> for salaried workers declined from 0.2993 to 0.2881 in the 1988-1995 period. Table 4.9 provides a detailed breakdown of the reduction due to education. The first line shows that inequity dropped considerably in each education level group, but inequity increased across the education groups. This means that inequity in income dropped within the group of workers with “complete primary school education”, but increased when comparing the “complete primary school education” group with the “complete high school education” workers. The drop

Figure 4.5. Income differentials by level of education, 1999



in inequity within an education group may be due to several reasons, but if salary is linked to the productivity of workers (as is usually accepted), and in turn productivity is related to the quality of education received, the reduction in inequality would indicate an improvement in the quality of the education received by the various groups of workers within the same level of education.

4.30 An increase in inequity across education levels indicates a growing distribution of higher salaries or a premium received by more educated workers. Salary distribution has to do with the supply of and demand for workers of different education levels, and the role that education policies can play is to alter the relative supply of workers at different education levels. In Table 4.9 there is a detailed analysis for each of the four education levels considered – positive numbers indicate a contribution to the decrease in inequity and negative number indicate a contribution to an increase in inequity. Inequity declines considerably for the groups with incomplete primary school and complete primary school, which underscores the government’s challenge to strengthen high school education in order to increase the

<sup>15</sup> A detailed analysis of income inequity and the changes in various inequity measures may be obtained from “Reformas Económicas y Distribución del Ingreso en Costa Rica” by Juan Diego Trejos, CEPAL, 1999.

number of high school graduates in the labor market and to reduce the differences in the quality of high school education received by different socio-economic groups.

**Table 4.9. Contribution of Education to Changes in Income Inequity, 1988-1995**

	Contribution to inequity reduction Theil-L 0.2993 to 0.2801		
	Total Reduction	Reduction within the group	Reduction between groups
<b>Education</b>	100.0	159.8	-59.8
Primary Incomplete	24.4	103.4	-79.0
Primary Complete and High School Incomplete	233.2	83.9	149.4
High School Complete and Tertiary Incomplete	-130.9	-70.4	-60.5
Tertiary Complete	-26.7	42.9	-69.6

SOURCE: Table 14 on dependent workers taken from "*Reformas Económicas y Distribución del Ingreso en Costa Rica*" by Juan Diego Trejos, CEPAL, 1999.

4.31 The participation rates for children from 15 to 17 years of age present a discouraging situation in terms of equity. Less than half of the boys and close to 60% of the girls aged 15 to 17 are in the "only studying" category. Young people aged 12 to 14 years and 15 to 17 years face totally different options in terms of education and labor market opportunities depending on their gender, place of residence and income quartile (Table 4.10). Approximately 80 percent of the 12 to 14 year olds are in school. Close to 9 percent of the children in this age group also work, and close to one-third of the working children also attend school. The greatest proportion of working children is among boys in the rural areas (20% work) and the lowest is among girls in urban areas (2% work).

4.32 There is a large gap between the lowest and highest income quartiles. Only 36 percent of boys in the poorest quartile are in the "only studying" category, compared with 70 percent in the highest income quartile. The corresponding figures for girls are 46 percent and 81 percent. More importantly, 46% of the boys in the poorest quartile are in the "only working" category, compared with 15% for the highest income quartile. An examination of labor market opportunities for young people from 15 to 17 of age confirms the need for an education policy that emphasizes education opportunities for young adults of low income families

**Table 4.10. Costa Rica: Population in high school age by activity status, 1999**

	From 12 to 14 years old				From 15 to 17 years old			
	Only Study	Study and Work	Only Work	Don't Study Don't Work	Only Study	Study and Work	Only Work	Don't Study Don't Work
Total Country	79.3	3.2	6.0	11.4	52.9	7.7	23.4	15.9
<i>Income Stratum</i>								
Male	79.4	4.8	9.4	6.3	48.3	9.1	34.1	8.5
Quartile 1	77.7	4.5	10.5	7.2	36.3	5.7	45.7	12.4
Quartile 2	74.3	7.1	10.4	8.3	44.6	8.0	37.2	10.1
Quartile 3	80.9	3.2	9.6	6.2	49.7	12.0	31.9	6.4
Quartile 4	91.7	3.2	4.7	0.4	69.9	11.6	15.2	3.3
Female	79.2	1.5	2.3	16.9	57.3	6.4	13.4	22.9
Quartile 1	73.2	0.9	2.6	23.2	45.8	4.9	16.8	32.5
Quartile 2	79.0	2.4	1.5	17.2	52.9	6.7	14.6	25.8
Quartile 3	82.3	1.9	3.2	12.7	62.5	8.3	12.3	17.0
Quartile 4	94.2	0.5	1.9	3.4	81.1	5.6	5.7	7.6
<i>Zone</i>								
Male	79.9	4.7	9.0	6.4	48.3	8.8	33.8	9.1
Urban	86.9	4.6	3.7	4.8	60.3	8.5	21.6	9.6
Rural	72.7	4.8	14.5	8.0	34.4	9.1	47.8	8.6
Female	79.5	1.5	2.3	16.7	58.9	6.1	12.9	22.1
Urban	88.4	1.0	1.3	9.3	69.9	5.9	10.5	13.7
Rural	70.7	2.0	3.3	24.0	46.2	6.2	15.7	31.8

SOURCE: INEC, Household Survey, 1999

### EQUITY IN EDUCATION

4.33 Equity and inefficiency are intrinsically linked to improving education performance. Problems with inefficiency affect the poor disproportionately and underscore the potential for using improvements in efficiency to reduce inequity in the system. Table 4.11 shows the profile of students who have stayed behind at least 2 years, classified into three age groups: 7 to 12 years old, 13 to 15 years old and 16 to 18 years old, and in three different time periods: 1990, 1995 and 1999. It is well known that the more students stay behind, the greater their risk of abandoning school, which exacerbates the inefficiency-equity problem. This is true particularly for older children since the opportunity cost of schooling increases with the child's age. The table shows that 31% of 7 to 12 year old children from the poorest quartile are in the "at risk" category, compared with 12% from the richest quartile, with other age groups showing a similar situation. There are also marked urban-rural differences and by gender. Over the decade, the results have deteriorated for certain groups.

**Table 4.11. Costa Rica: population attending school that has either flunked or is over-age  
(percentage with at least two years less than the standard education level for their age)**

Indicators	From 7 to 12 years old			From 13 to 15 years old			From 16 to 18 years old		
	1990	1995	1999	1990	1995	1999	1990	1995	1999
Total Country	22.5	19.2	21.1	42.5	39.8	44.4	50.1	45.4	54.6
Income stratum <sup>1</sup>									
Quartile 1	32.3	26.9	31.2	61.6	48.9	63.2	61.1	66.9	64.1
Quartile 2	21.5	19.2	21.8	46.1	51.5	43.5	56.5	47.6	64.9
Quartile 3	16.4	11.7	13.9	36.3	35.7	40.7	57.6	47.2	52.9
Quartile 4	7.8	8.0	6.5	20.0	19.5	25.9	28.9	29.7	41.2
Region									
Metropolitan Area	16.1	14.1	19.4	31.8	32.7	46.5	44.3	41.4	59.3
Central Urban Region	13.4	7.0	12.8	29.6	32.1	31.0	40.3	32.0	39.6
Central Rural Region	21.0	19.7	19.9	46.8	42.5	38.2	54.1	47.9	52.9
Chorotega Region	28.4	24.5	24.7	54.0	43.5	43.8	55.0	52.4	53.0
Central Pacific	27.7	24.0	25.5	51.5	49.5	48.5	57.1	58.0	62.2
Brunca Region	29.1	23.9	26.3	50.1	42.6	55.2	59.7	56.0	64.3
Atlantic Region	37.2	30.5	28.6	69.7	56.8	58.9	69.5	66.1	65.7
Northern Region	30.5	23.3	24.6	58.2	47.4	54.7	76.1	51.5	63.9
Zone									
Urban	16.8	14.0	18.0	33.7	34.1	41.2	45.0	39.9	52.9
Rural	28.1	23.6	24.5	56.0	47.2	48.6	61.2	56.2	58.7
Gender									
Male	24.7	19.8	22.6	44.9	42.1	45.9	50.8	47.0	60.1
Female	20.2	18.6	19.9	39.8	37.5	42.8	49.2	44.2	50.7

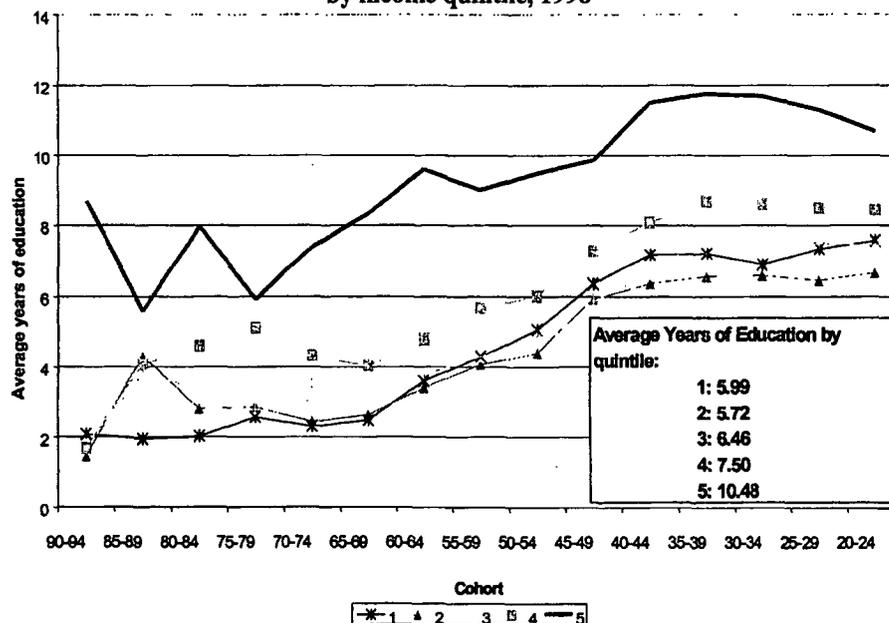
1/ Based on family per capita income. Quartile 1 includes the 25% of families with the lowest per capita income.

SOURCE: JD Trejos based on the National Statistics Institute's Multipurpose Homes Survey.

4.34 Another relevant aspect in the analysis of education equity is the average number of years of educational attainment for each of the income quintiles.<sup>16</sup> According to estimates based on the 1998 Household Survey, people in the richest quintile had on average 4.5 more years of education than people in the poorest quintile (10.5 years in the richest quintile versus 5.9 years in the poorest quintile). So while a 25 to 29 year old person in the richest quintile has on average just less than 12 years of education, their peers in the lowest income quintile have less than 7 years of education (Figure 4.6). These figures may be reflecting urban-rural differences in repetition and dropout rates in the country. Generally these rates are higher in poor, rural zones than in urban zones. Thus, while education in Costa Rica shows stagnation in equity and efficiency indicators, the poorest zones show continued deterioration since the 80's.

<sup>16</sup> Hernández, Luis C. 2001. Mimeo.

**Figure 4.6. Average years of education by cohort and by income quintile, 1998**



SOURCE: Adapted from Hernández, Luis C. 2001. Mimeo

4.35 To address these issues, four equity related programs have been initiated: (a) *School Vouchers*; (b) *Student Transportation*; (c) *School Scholarships*; and (d) *the School Lunch Program*. Each of these programs will be considered in detail in the chapter on social assistance programs.

**Table 4.12. Costa Rica: General Government consolidated education expenditure, 1990-1999 (as GDP percentage)**

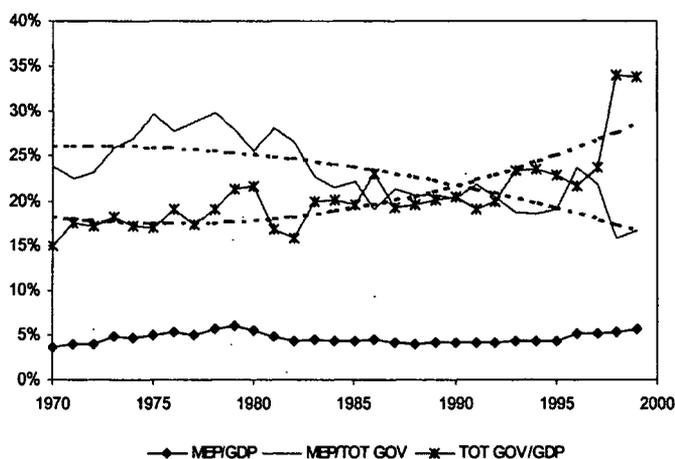
Category	1990	1991	1992	1993	1994	1995	1996	1997	1998
Education	3.6	3.5	3.6	3.9	4.0	3.5	4.0	4.0	4.2
General Education	2.2	2.1	2.2	2.4	2.6	2.1	2.6	2.7	2.9
Parauniversity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Professional Education	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3
Post-high school Education	1.2	1.2	1.2	1.1	1.2	1.1	1.1	1.0	1.0

SOURCE: JDTREJOS based on MEP statistics and from the Ministry of Finance Technical Budgetary Authority.

### STRUCTURE OF THE EDUCATION BUDGET

4.36 Public education expenditures represented around 4% of GDP throughout the nineties. Most of the expenditures in education are for general education: pre-school, primary and high school education (Table 4.12). The Constitution mandates expenditures of 6% of GDP on education, but a considerable upward readjustment of the GDP estimates at the end of the 90's resulted in a downward readjustment in education expenditures as a percentage of GDP. The Government passed a decree that establishes a methodology to achieve the target of 6% of GDP in the next ten years. The plan is to manage two sets of

**Figure 4.7. MEP expenditures as percentage of GDP and of Government total expenditures, 1970-1999**



SOURCE: Education Financing, October 1999, Ministry of Education

GDP figures over the next ten years, and to increase the expenditure in education every year, by an amount equal to 10% of the difference between the two targets.<sup>17</sup>

4.37 Figure 4.7 shows the trends in government general expenditures as a proportion of GDP compared with the education expenditures as a proportion of GDP. The figure reveals a very interesting situation: a relatively stable trend in education expenditures as a proportion of GDP, the result of two opposing tendencies -- total government expenditures as a proportion of GDP show an upward trend, while the MEP expenditures trend downward. The opposing trends cancel each other out when education expenditures as a

proportion of GDP are computed. The graph used old GDP figures and the education expenditures are MEP expenditures only, but even if approximately 10% of the expenditures outside the Ministry budget showed an opposite trend, the conclusion would be the same: expenditures in education have had a tendency to be displaced by other expenditures within overall public spending.

**Table 4.13. Expenditures in public education – an international perspective**

Country	% GDP	% of total public spending
Argentina	3.7%	13.9%
Brazil	4.8%	16.9%
Chile	3.2%	15.9%
Israel	7.5%	-
Malaysia	4.4%	14.1%
Thailand	4.5%	21.9%
Mexico	4.5%	-
Portugal	5.8%	-
Spain	4.7%	-
OECD aver. per country	5.1%	14.0%
World average (according to World Bank WDI)	4.8%	-
Costa Rica	4.0%	16.7%

SOURCE: Education at a Glance OECD Paris 2000 Table B1.1\* Page 54 and Table B1.3 Page 59

4.38 Table 4.13 shows international statistics for the year 2000, including data for several non-OECD countries. The table shows that Costa Rica's current education expenditure level is at the low end compared with other countries, but after reaching the 6% level required by the Constitution, Costa Rica would be above the OECD average.

<sup>17</sup> It must be pointed out that the education budget includes expenditures in addition to the Ministry of Education budget, most for education beyond high school, which is administered by other institutions. When this document was being written, there was a dispute as to the constitutionality of the new agreement – there is clearly tension between the constitutional mandate and the political priority that Costa Rica would like to give to education on the one hand, and the tight fiscal situation, on the other hand.

## Expenditures by economic classification

4.39 Table 4.14 shows that from 1995 to 1998 there was a solid increase in capital expenditure (from 3.6% to 7.6%), with a reversal in 1999 (4.4%). Many of the initiatives to expand pre-school and high school coverage and technology-based initiatives require capital expenditures. The decline in capital spending may be one underlying cause of the stagnation in education indicators noted in preceding sections. As recurrent salary costs consume an increasing share of the total sector budget, the marginal resources available to improve access, efficiency and quality decline.

4.40 International comparisons of capital expenditures highlight the gap that exists between Costa Rica and OECD countries. Table 4.15 shows that OECD countries spend a greater proportion of their education budgets on capital expenditure than Costa Rica. Countries considered as competitors with Costa Rica in computer technology, such as Malaysia and the Philippines, spend three times Costa Rica's level and even more than the OECD country average.

**Table 4.14. Costa Rica: General Government consolidated expenditures  
by economic category, 1990-1999**

Description	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>Millions of U.S.\$ 1999</i>										
<b>EDUCATION SECTOR</b>	347.2	329.3	369.5	425.6	467.0	420.2	482.0	521.4	590.9	614.6
Ordinary Expenditures <sup>1/</sup>	335.3	320.6	358.6	410.5	445.2	405.2	458.6	483.9	546.3	587.4
Capital Expenditures	11.9	8.7	10.9	15.1	21.8	15.0	23.4	37.5	44.6	27.2
<b>General Education</b>	205.3	193.4	219.4	268.2	299.4	256.1	313.9	344.2	408.5	435.2
Ordinary Expenditures <sup>1/</sup>	205.0	193.2	217.3	262.8	290.6	253.4	303.2	324.1	381.0	417.5
Capital Expenditures	0.4	0.3	2.1	5.4	8.8	2.7	10.7	20.2	27.5	17.7
										0.0
<b>Post High School Education</b>	141.9	135.9	150.1	157.4	167.6	164.2	168.1	177.1	182.5	179.4
Ordinary Expenditures <sup>1/</sup>	130.3	127.4	141.3	147.7	154.5	151.8	155.4	159.8	165.3	169.9
Capital Expenditures	11.6	8.4	8.8	9.7	13.0	12.3	12.7	17.3	17.1	9.5
<i>Relative Figures</i>										
<b>EDUCATION SECTOR</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ordinary Expenditures <sup>1/</sup>	96.6	97.4	97.0	96.5	95.3	96.4	95.1	92.8	92.4	95.6
Capital Expenditures	3.4	2.6	3.0	3.5	4.7	3.6	4.9	7.2	7.6	4.4
<b>General Education</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ordinary Expenditures <sup>1/</sup>	99.8	99.9	99.0	98.0	97.1	98.9	96.6	94.1	93.3	95.9
Capital Expenditures	0.2	0.1	1.0	2.0	2.9	1.1	3.4	5.9	6.7	4.1
<b>Post High School Education</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ordinary Expenditures <sup>1/</sup>	91.8	93.8	94.2	93.8	92.2	92.5	92.4	90.2	90.6	94.7
Capital Expenditures	8.2	6.2	5.8	6.2	7.8	7.5	7.6	9.8	9.4	5.3

1/ Excludes Payment of Social charges or contributions to Social Security.

SOURCE: JDTREJOS based on MEP and Finance Ministry's Budget Authority Technical Secretariate Statistics.

**Table 4.15. International perspective on economic classification of education expenditures**

Country	Capital Spending as % of Total	Salaries as % of Current Spending	Non-salary Expenditures as % of Current Spending
Argentina	8%	96%	4%
Brazil	7%	82%	18%
Chile	6%	67%	33%
Israel	11%	77%	23%
Jordan	14%	96%	4%
Malaysia	11%	84%	16%
Phillipines	14%	83%	17%
Uruguay	6%	88%	12%
OECD Country av.	9%	80%	20%
Costa Rica	4%	93%	7%

SOURCE: Education at a Glance, OECD, Paris 2000, Table B5.1, Page 103

### Expenditures by education level

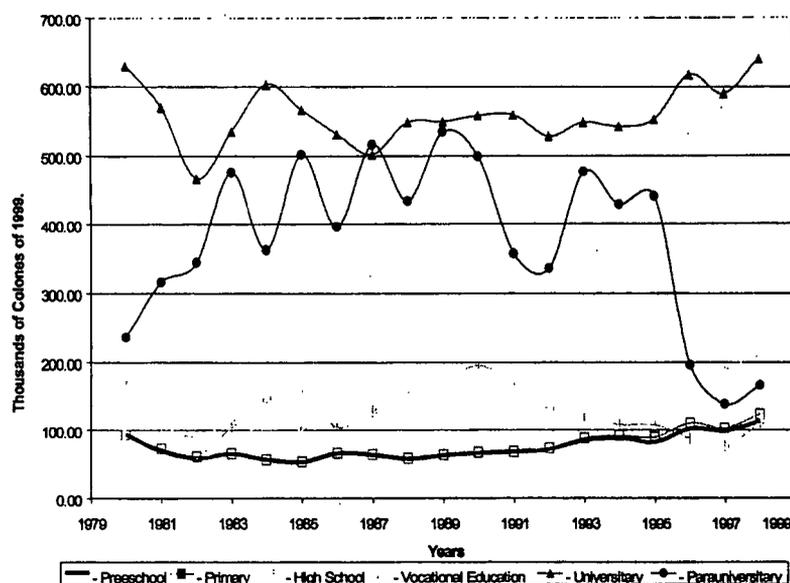
4.41 Real education expenditures increased 76 percent over the decade, driven by a near-doubling of primary and secondary spending and a four-fold increase in pre-school spending (Table 4.16). Given the fact that public enrollment in the lower education levels is biased toward lower income groups, this growth in expenditure is pro-poor. However, the slow growth in higher education expenditures reveals an underlying problem that was discussed in the preceding section on equity. Coverage of higher education remains limited and without additional spending and better targeting the poor will continue to have fewer opportunities in the labor market.

**Table 4.16. Costa Rica: General Government consolidated expenditure on education by education level, 1990-1999.**

Education Level	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>Millions of U.S.\$ 1999</i>										
Total Education Expendit.	347.2	329.3	369.5	425.6	467.0	420.2	482.0	521.4	590.9	614.6
General Education	205.3	193.4	219.4	268.2	299.4	256.1	313.9	344.2	408.5	435.2
Pre-school	9.9	9.9	13.3	13.9	18.2	16.5	21.6	24.3	30.9	35.2
Primary	118.3	111.2	123.5	152.3	165.6	139.6	169.7	178.3	212.1	226.8
High School	72.3	67.6	76.9	94.2	107.0	92.0	111.0	130.8	151.0	157.6
Special	4.8	4.7	5.7	7.8	8.6	8.0	11.5	10.8	14.4	15.6
Professional Formation	24.8	20.5	26.2	27.4	26.6	31.4	35.9	38.5	38.3	40.3
Higher Education	117.1	115.3	123.9	130.0	141.0	132.8	132.2	138.6	144.2	139.1
Parauniversity	3.8	3.1	3.6	4.4	5.3	5.2	3.9	5.2	6.0	5.9
University	113.3	112.2	120.3	125.6	135.7	127.5	128.3	133.4	138.2	133.2
<i>Relative Structure</i>										
Total Education Expendit.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
General Education	59.1	58.7	59.4	63.0	64.1	60.9	65.1	66.0	69.1	70.8
Pre-school	2.8	3.0	3.6	3.3	3.9	3.9	4.5	4.7	5.2	5.7
Primary	34.1	33.8	33.4	35.8	35.5	33.2	35.2	34.2	35.9	36.9
High School	20.8	20.5	20.8	22.1	22.9	21.9	23.0	25.1	25.6	25.6
Special	1.4	1.4	1.6	1.8	1.8	1.9	2.4	2.1	2.4	2.5
Professional Formation	7.1	6.2	7.1	6.4	5.7	7.5	7.5	7.4	6.5	6.6
Higher Education	33.7	35.0	33.5	30.5	30.2	31.6	27.4	26.6	24.4	22.6
Parauniversity	1.1	0.9	1.0	1.0	1.1	1.2	0.8	1.0	1.0	1.0
University	32.6	34.1	32.6	29.5	29.1	30.3	26.6	25.6	23.4	21.7

SOURCE: JDTREJOS based on MEP statistics and from Ministry of Finance Technical Budgetary Authority.

**Figure 4.8. Real per capita expenditure by level of education, 1979-1999**



SOURCE: Adapted from Hernández, Luis C. 2001. Mimeo.

12 percent spending on primary education lags behind leaders such as Chile (17 percent) and OECD countries (19 percent). (Table 4.17).

4.44 Table 4.15 shows that 93% of education expenditure at the tertiary level is for salaries, which surpasses the OECD average of 80% and the average for other middle income countries. The trends over the decade in the distribution of expenditures across categories are not clear (Table 4.18): there was an increase in non-salary expenditures for general education at the beginning of the 90's, but they remain below the 1993 level of 9.5%. Hiring more teachers does not solve the quality problems that underlie efficiency problems of high repetition and dropouts. There should be a greater effort to improve the supply of didactic materials, and new types of expenditures to support intensive technological schooling at high school level.

**Table 4.17. Distribution of public education expenditures across education levels**

Country	As share of per capita GDP %	
	Primary	High School
Argentina	12%	15%
Brazil	13%	16%
Chile	17%	18%
Jordan	21%	23%
Malaysia	10%	16%
Philippines	11%	16%
Uruguay	11%	13%
OECD country aver.	19%	25%
Costa Rica	12%	18%

SOURCE: Education at a Glance, OECD, Paris 2000, Table B4.2, Page 95

4.42 Per capita spending shows less encouraging results over the decade. While pre-school, primary and secondary education show slight increases in per capita spending, parauniversity and vocational education show sharp declines. University spending increased sharply over the second half of the decade. Higher education receives the most resources per person, nearly six times the per capita expenditures at primary and high school levels. (Figure 4.8).

4.43 Comparing the distribution of expenditures by education level in Costa Rica with middle income and OECD countries, Costa Rica's

**Table 4.18. Costa Rica, General Government Current Expenditure in Education by Economic Category**

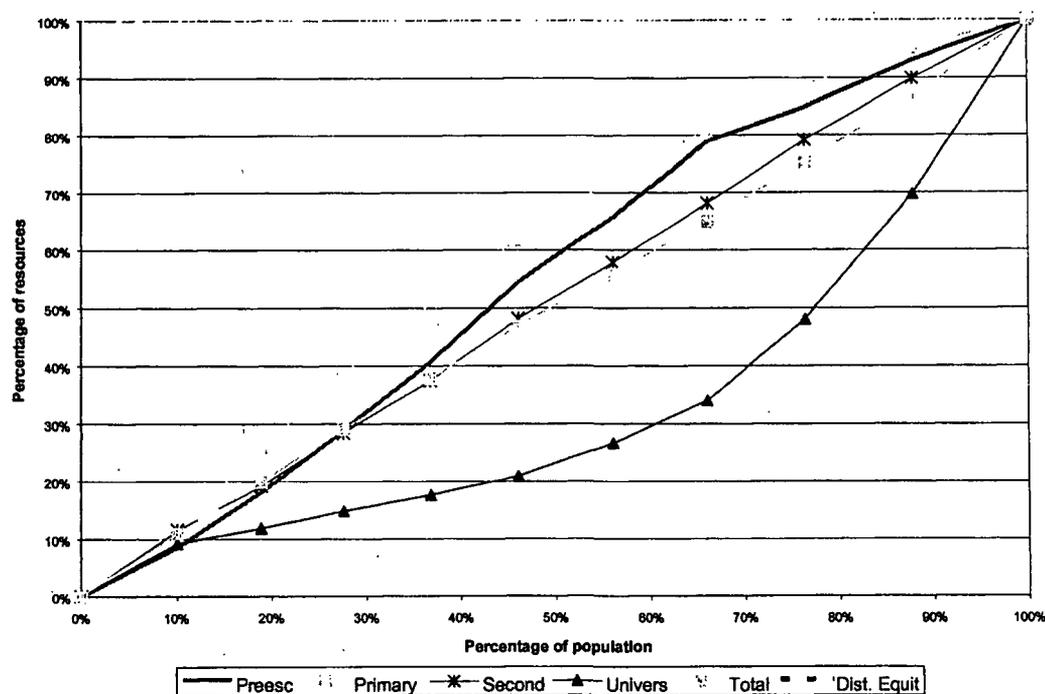
Description	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>Millions of U.S.\$</i>										
<b>EDUCATION SECTOR</b>										
Ordinary Expenditures	335.3	320.6	358.6	410.5	445.2	405.2	458.6	483.9	546.3	587.
Wages and Salaries <sup>1</sup>	286.6	280.9	300.3	340.5	372.0	340.8	391.2	393.5	460.5	509.
Other Expenditures	48.7	39.7	58.3	70.0	73.2	64.4	67.4	90.4	85.8	77.
								0.0		
<b>General Education</b>										
Ordinary Expenditures	205.0	193.2	217.3	262.8	290.6	253.4	303.2	324.1	381.0	417.
Wages and Salaries <sup>1</sup>	192.2	188.4	207.7	238.0	267.4	236.4	285.0	304.9	348.9	389.
Other Expenditures	12.8	4.8	9.7	24.8	23.2	16.9	18.2	19.2	32.1	28.
<b>Post High School Education</b>										
Ordinary Expenditures	130.3	127.4	141.3	147.7	154.5	151.8	155.4	159.8	165.3	169.
Wages and Salaries <sup>1</sup>	94.4	92.5	92.7	102.5	104.6	104.3	106.2	88.6	111.6	120.
Other Expenditures	35.9	34.9	48.6	45.2	49.9	47.5	49.2	71.2	53.7	49.

4.45 It is possible to estimate the expenditure benefits for each income decile, using per capita expenditures at each level and data on the distribution of resources and number of household members at each education level. Figure 4.9 shows that the resource distribution favors lower income groups at the primary level and favors the highest income deciles at the university level. At the primary level, 70% of all resources benefit the poorest 50% of the population, but at university level, 70% of resources benefit the wealthiest 30% of the population.

4.46 The analysis of education expenditures shows clearly that the problem in the education sector is not budgetary, but management and budget allocation. Studies currently under way have found that 15 to 20 years would be necessary in order to reach educational coverage of 100% (assuming a 5 or 6% increase in national income that would generate a gradual increase in GDP per capita). These studies underscore the need to address the problems of coverage through improvements in efficiency and equity, by developing programs that seek value-for-money.

4.47 A micro analysis of the sector reveals serious issues in human resource management. For example, the number of sections assigned per designated teacher is between 0.8 and 0.9, while the optimum parameters established by UNESCO indicate that it should be between 1.2 and 1.5. On average a teacher attends 0.8 sections, which indicates that a high percentage of teachers are not teaching classes, either because they are sick or because they are assigned administrative tasks (some principals have discretion in assigning tasks). To date, there are no clear criteria for setting the size of student groups.

**Figure 4.9. Accumulated resource distribution by income decile and by level of education**



SOURCE: Adapted from Hernández, Luis C. 2001. Mimeo.

### PRIORITIES IN THE EDUCATION SECTOR

4.48 This chapter has given a general overview of the education sector in Costa Rica, examining coverage, internal efficiency, equity and the links between education and labor market participation. The analysis shows that there are great challenges facing the education sector, mainly with respect to increasing high school coverage, increasing participation by the poor at all levels of education and decreasing inefficiency. The main education sector outcomes are presented in Table 4.19.

**Table 4.19. Main outcomes of the education sector, 1999**

Age	Education Level	Enrolled	Population (CELADE)	Coverage	Dropout rates	Repetition	% who complete studies	Expenditures (million US\$ 1999)
18 and more	University Education	61,654 <sup>1/</sup>	819,500	7.5% <sup>2/</sup>	-	-	-	133.2
12-17	Secondary Education	235,425	414,042	56.9%	11.3	10.5	32.7	157.6
6-11	Primary Education	535,057	513,815	104.1%	4.4	9.5	76.4	226.8
5.5-6.5	Pre-school- (Transition Cycle)	69,679	84,917	82.1%	3.6	-	-	35.2*
4.5-5.5	Pre-school- (Kinder)	4,915	85,658	5.7%	-	-	-	
0-4.5	Pre-school- (Maternal-Infant)	3,373	393,732	0.9%	-	-	-	

\* For the entire pre-school education category (0-5.5 years)

1/ Enrollment at state university education institutions, CONARE

2/ Population aged from 18-29 years, CELADE.

In summary, the main issues identified are:

### 1. Increasing coverage of pre-primary education

4.49 Early childhood education has proven worldwide to be a cost-effective intervention to improve children's performance in basic education in particular and in society at large. The current pre-primary coverage for poor children under 5.5 years old in Costa Rica of 8.6 percent (2001) is very low for the country's development and social spending levels. In addition to the CEN-CINAI and the *Hogares Comunitarios* programs described below as part of the social protection network, the Ministry of Education is responsible for pre-primary education covering 5.5 to 6.5 year olds. The program covers about 70,000 children (82 percent coverage based on figures from Ministry of Education). The Ministry of Education should aim to: (i) increase pre-primary coverage primarily in rural areas; (ii) improve quality by introducing a pedagogical component; and (iii) increase parental involvement.

### 2. Improving quality in basic education

4.50 The Ministry of Education needs to make it a priority in basic education (grades 1-6) to reduce repetition and dropout rates, especially in the first and sixth grades, increase learning achievements and introduce informatics. The data indicate that completion rates among primary school graduates increased from 77 percent in 1990 to only 79 percent in 1999. The situation is even more acute when disaggregated by income level. While 92 percent of all children in the highest income group completed primary school, only 62 percent in the lowest income group finished primary school. To improve completion rates a pilot Program of Excellence was implemented in 100 urban and rural schools with alarmingly high repetition and dropout rates and low learning scores in 2000. The Program of Excellence includes: (i)

strengthening teaching and learning of reading, writing and math skills in first and sixth grades; (ii) making more effective use of learning assessment findings; (iii) improving in-service teacher training; (iv) establishing informatics laboratories in 45 of these schools; and (v) strengthening community and parental participation in school-related matters. The Ministry of Education needs to expand the interventions in the Program of Excellence once they have been evaluated and shown good results. Further, improved targeting to groups with particularly low outcomes would make more effective use of limited funds.

### **3. Increasing coverage and improving the quality of secondary education**

4.51 Costa Rica's progress in achieving universal primary education coverage is not matched in lower secondary (grades 7-9) and upper secondary (grades 10-11/12). Net enrollment rates for secondary education (13-19 year olds) are only about 61 percent (below the mean for LAC) and far lower than OECD or Asian economies.<sup>18</sup> This reflects, to a large extent, high dropout and repetition rates, especially in grade 7 and extremely low transition rates from basic to post-basic education (from grade 9 to 10). Enrollment is especially problematic for the poor. Nearly 50 percent of adolescents between 16 and 18 years old are no longer in school and are not working. If improvements in value for money are to be obtained, structural changes will have to be made in the following areas: (i) revise the existing curriculum; (ii) improve teacher training; (iii) increase the supply of secondary education through a menu of options, including traditional schools, tele-secundarias, distance learning, open-access education, virtual schools and vocational training; (iii) promote collaboration with the private sector to strengthen the relevance of secondary education; and (iv) help parents and students, especially in rural areas, to offset part of the opportunity costs of studying through scholarships, conditional transfers, and other supplemental financing schemes.

### **4. Improving targeting and equity**

4.52 The government needs to improve the targeting and equity of education, in particular of programs directed at poor students which are run by the Ministry of Education, such as the school feeding program, transportation and scholarships. The school lunch program is not targeted and there has been no evaluation of its impact.<sup>19</sup> About one-third of users of the transport subsidy do not need it, and some needy students are not covered. Other programs, such as the scholarship and school bond programs, appear to have better targeted the poor in recent years since starting to use the SIPO system to select beneficiaries (GOCR, 2000a). To improve targeting, most, if not all, education welfare programs (including the school lunch program), should consider using SIPO to select their beneficiaries.

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<sup>18</sup> The figure for Costa Rica is from the 2000 population Census.

<sup>19</sup> The government has recently requested the UNDP Office in Costa Rica to undertake a thorough review of all welfare programs run by the Ministry of Education. This review will include administrative matters, targeting and costs, among others (UNDP, 2000).





# **HEALTH SECTOR**

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## HEALTH SECTOR

5.1 By the year 2000, Costa Rica had made substantial progress in improving the health of the population. Costa Rica consistently ranks in the top 40 countries in the world in life expectancy (76.7 years), infant mortality (10.3 per 1,000 in 2001), maternal mortality and health system performance (ranked 36<sup>th</sup> out of 191 countries by WHO). Table 5.1 compares key indicators with several countries. Although Costa Rica's health indicators are among the best in the region and coverage of health services is nearly universal, the health sector faces important challenges to contain costs, improve efficiency of resource use and preserve financial equilibrium in the future.

**Table 5.1: Comparative Health Status Indicators**

<i>Country</i>	Year	Mortality Rates ( x 1000)		Life Expectancy at birth (years)		
		< 1 year	< 5 years	Total	Males	Females
Costa Rica	2001	10.3	14.8	76.7	74.2	79.3
México	1997	31	38	72.6	69.6	75.6
Chile	1997	11	13	75.4	72.4	78.4
Argentina	1997	22	24	73.3	69.7	76.9
Brazil	1997	34	44	67.2	63.5	71.3
Jamaica	1997	12	14	74.7	72.5	76.9
United States of America	1997	7	10	76.8	73.5	80.2
United Kingdom	1997	6	7	77.5	75.0	80.0

Sources: Costa Rica: Indicadores Básicos 1999, MS, The World Bank: World Development Report 1999/2000, Pan American Health Organization, Health Statistics from the Americas, 1998 edition.

5.2 The health sector is starting to feel increasing strain as Costa Rica's epidemiological and demographic profile changes and opportunities to use the private sector to generate efficiency, quality and competition start to expand. Over the past decade, the Government's objective has been to maintain spending, currently at about 5.5 percent of GDP, while allocating resources more efficiently to improve quality of service, and equity and efficiency of service delivery. Increases in chronic diseases such as cancer, hypertension and diabetes are placing an increasing strain on public finances and signal the need to shift the healthcare model, increase investment in prevention and promotion, and also invest in technology and diagnostic techniques that will improve health status. Additional and persistent challenges are: to improve the quality of health services, promote equity in service access especially in rural communities, improve user satisfaction, and develop a more pluralistic health care provider market, in which private and public sector providers compete for funds.

5.3 In response to these challenges, the country began an ambitious health reform process in the mid-nineties with the overall objectives of changing the primary care model, modifying the financing and resource allocation mechanisms and modernizing the social security system. The reforms aim to improve value-for-money by increasing the quantity and quality of the services--and ultimately improving health outcomes--in a setting of greater efficiency and financial sustainability.

5.4 This chapter provides a description of the Costa Rican health system, reviews performance over the past decade and provides an overview of the sector policies and priorities for reorganization and modernization within the health sector reform context. The sector's performance is assessed with respect to institutional reorganization, efficiency, coverage and equity, financing and financial sustainability, resource allocation, quality and user satisfaction, and private sector participation. The final section reviews the reform's principal achievements and the sector's principal challenges, and the implications for policy design and implementation.

## GENERAL DESCRIPTION OF THE COSTA RICAN HEALTH SECTOR

5.5 Concerted efforts to invest in the population's health and implement a universal social insurance system have yielded impressive results. Life expectancy at birth is 76.7 years (1999), comparable with industrialized countries like the United Kingdom and the United States of America. And infant mortality rates have been reduced to levels close to 10 deaths per thousand live births, similar to the levels achieved by developed countries (Table 5.1). The low annual incidence of diseases such as measles, tuberculosis and dengue, and the absence of cholera cases, confirm the achievements attained by Costa Rica in the health area (Table 5.2).

5.6 These results are the product of the organization and actions of the group of institutions that make up the health sector. The performance of the health sector is complemented by impressive achievements in water and sanitation where 94.5 percent of the population have access to drinking water (appendix Table 5.1) and 89.5 percent are connected to sewer systems; even in rural areas, access is above 80 percent. Immunization coverage in children under one year old is 85% and Costa Rica was one of the first Latin American countries to offer universal and compulsory coverage of social security, in the seventies.

**Table 5.2. Incidence of Selected Causes of Morbidity (1995-1998)**

Annual Incidence Rate	Costa Rica	Mexico	Venezuela	Brazil	Colombia
Tuberculosis (x 10 <sup>5</sup> hab.): - Total	18.5	22.2	25.0	54.2	26.6
Smear positive	15.1	9.2	14.3	27.6	20.8
AIDS* (x 10 <sup>5</sup> hab.)	6.1	4.7	4.4	11.0	2.5
Prevalence of low birth weight	0.1	0.1	0.1	0.1	0.1

\* Data correspond to 1995.

Source: Costa Rica: Basic Indicators 1999, MS., Work Group of WHO/PHO/UNAIDS.

The World Bank: World Development Report 1999/2000, Pan American Health Organization. Health Statistics from the Americas, 1998 edition.

### Health Sector Organization

5.7 The government has undertaken a number of reforms that have led to a well-defined institutional structure to deal with various aspects of the health system. The key functions of regulation, financing and provision, private insurance, water and sanitation and education are assigned to separate individual entities that each perform a key role in the sector. Officially, the Health Sector is composed of five public entities:

- **Caja Costarricense de Seguro Social (CCSS)** which acts as the payer, purchaser and provider of health care services with a network of 29 hospitals and 100 health zones;
- **Ministry of Health (MOH)**, with governance and regulatory functions;
- **Instituto Nacional de Seguros (INS)**, which manages worker's compensation programs and participates in the supply of some rehabilitation services;
- **Instituto Costarricense de Acueductos y Alcantarillados (AyA)**, in charge of providing drinking water and sanitary sewage service together with the municipalities; and
- **Universidad de Costa Rica (UCR)** working for education and development of health professionals.

5.8 The CCSS is the key actor in the sector, managing most health care financing and provision in the context of a universal social health insurance system. The national health insurance system covers nearly 90 percent of the population, offering a broad defined package of services to workers under a payroll contribution scheme, with government contributions covering the poor and unemployed. The social security institute manages a network of 29 hospitals and nearly 100 health zones that include clinics and mobile teams of physicians nurses and technicians.

5.9 The MOH is the steward, or *rector*, of the health sector, and among its main functions are protection of the population's public health through control of vectors, coordination of vaccination campaigns, health, sanitary and market regulations, enforcement of the legal and regulatory frameworks, epidemiological surveillance, and research and technological development in the sector. It also has a key role in environmental sanitation, nutrition and in health promotion. MOH's Its financing comes from general taxes and earmarked taxes. From 1995 onwards, the MOH transferred nearly all responsibility for provision of primary care to the CCSS, seeking to focus on the regulatory functions and policy development. This move followed efforts in the late 1970's by the sector to consolidate functions when the MOH transferred all hospitals to the CCSS.

5.10 The INS is the institution that administers the state private insurance monopoly. The institution provides automobile, workers compensation, health and other private insurance. INS purchases services from the CCSS for traffic accidents and for some workers' compensation cases that require healthcare services.

5.11 The drinking water supply and sanitary sewage systems have been centralized in the AyA since the sixties. There are, however, a considerable number of rural aqueducts administrated by local associations and by municipal entities, which have been progressively turned over to AyA. To finance their activities, the AyA charges users for utilization of the services.

5.12 In the case of the Universidad de Costa Rica, education and training of health professionals is financed by its general budget, which is in turn financed by direct transfers received annually from the National Budget.

### **Structure of Public Health Expenditure**

5.13 Total public health spending averaged 5.5 percent of GDP throughout the decade, achieving a high of 6 percent in 1996 and declining to 5.3 percent by 1999 (Table 5.3). The CCSS accounts for over 80 percent of public health spending followed by Water and Sanitation (AyA) and the Ministry of Health (MOH) with 10 and 8 percent respectively. The INS and UCR are allocated around 5% and 1% of the health budget, respectively. Overall, public health spending accounts for close to 40 percent of social expenditures. Per capita spending in the public sector ranged from US\$200 to \$220 throughout the 1990s.

**Table 5.3. Structure of public expenditure in the Health Sector, 1990 - 1999**  
(in billions of colones)

Year	TOTAL		SS		MOH		AyA		INS		UCR	
	nominal	% GDP	nominal	% GPS								
90	40.2	5.9	30.1	74.7	4.2	10.5	3.2	8.1	2.2	5.5	0.5	1.2
91	49.8	5.7	37.6	75.5	4.9	9.8	3.8	7.6	2.9	5.8	0.6	1.2
92	61.8	5.4	48.7	75.5	5.7	9.2	5.2	8.4	3.5	5.6	0.8	1.3
93	80.7	6.0	61.6	76.3	6.7	8.3	6.5	8.1	5.0	6.2	0.9	1.1
94	95.5	5.8	73.4	76.8	7.8	8.2	7.8	8.2	5.5	5.7	1.0	1.0
95	119.7	5.8	90.8	75.9	10.3	8.6	9.6	8.0	7.8	6.5	1.2	1.0
96	146.8	6.0	110.8	75.5	11.8	8.0	13.5	9.2	8.9	6.1	1.7	1.2
97	167.6	5.7	125.4	74.8	12.2	7.3	18.5	11.0	9.5	5.7	2.1	1.2
98	196.4	5.5	151.6	77.2	15.1	7.7	19.7	10.0	7.4	3.8	2.5	1.3
99	230.8	5.3	185.0	80.2	17.0	7.4	20.0	8.6	6.1	2.7	2.6	1.1

NOTE: in billions of colones. SS=Seguro Salud (Health Insurance Fund) MOH= Ministry of Health AyA = Instituto Costarricense de Acueductos y Alcantarillas (ICAWA) INS = Instituto Nacional de Seguros Seguros UCR = Universidad de Costa Rica %GPS = percentage of public expenditure in health sector

Source: Sums: CCSS; GDP: BCCR website; and own calculations.

**Table 5.4. Evolution of Public Expenditures in the Social Sector, 1990 - 1999**  
(in billions of 1995 constant colones)

Year	TOTAL		SS		MS		AyA		INS		UCR	
	real	p/cap.	real	% incr.	real	% incr.	real	% incr.	real	% incr.	real	% incr.
90	90.1	29.7	67.3		9.5		7.3		5.0		1.1	
91	86.6	27.9	65.4	-2.9	8.5	-10.1	6.6	-9.0	5.0	1.1	1.1	-3.4
92	88.3	27.7	66.7	2.0	8.1	-5.1	7.5	12.8	4.9	-1.6	1.1	5.8
93	105.0	32.2	80.2	20.1	8.7	7.6	8.5	13.4	6.5	31.6	1.2	4.6
94	109.5	32.8	84.1	4.9	9.0	3.1	9.0	6.2	6.3	-3.9	1.1	-2.5
95	111.5	32.7	84.6	0.5	9.6	7.1	8.9	-0.5	7.3	16.5	1.1	-5.3
96	116.3	33.3	87.8	3.8	9.3	-2.8	10.7	19.9	7.1	-2.8	1.4	27.4
97	117.3	32.9	87.7	-0.1	8.5	-8.9	12.9	20.4	6.6	-6.0	1.5	5.8
98	123.0	33.8	95.0	8.2	9.4	11.0	12.4	-4.3	4.7	-30.1	1.6	9.1
99	131.4	35.3	105.3	10.9	9.7	2.7	11.4	-8.1	3.5	-24.9	1.5	-5.7

Note: Per capita amounts are in thousands of colones

Source: IPC: BCCR website; Population and sums: CCSS; and own calculations.

5.14 CCSS expenditures have grown continuously during the last decade (see Table 5.4 and Appendix Table 5.2); real expenditures went from an average of 67 billion colones at the beginning of the nineties, to over 105 billion at the end of the decade, a real increase of 36% in eight years. The UCR showed a similar increase in real expenditures, beginning the 90s with 1.075 billion colones and ending the decade with over 1.5 billion colones. Only the AyA increased by more, going from 7 billion colones to 11.4 billion colones at the end of the decade (an increase of almost 80%), caused mainly by the increase in 1996 when AyA took over the administration of several aqueducts previously run by local associations and municipalities. In contrast, the MOH's real expenditure level remained practically unchanged, with a slight decrease that is mostly explained by the transfer of health delivery activities to the CCSS. The INS shows the most irregular evolution of all the sector's public institutions: a 36% increase up to 1997, a drastic real expenditure contraction in 1998 caused by a budgetary adjustment, and ending the decade with a smaller expenditure than in 1990/91. During the nineties the Sector's consolidated real per capita public expenditure went from around 29,700 colones per inhabitant in the year 1990/91 to almost 35,300 colones (US\$ 210) in 1999, representing a real increase of 19% over the period (Table 5.4).

## Private Health Expenditure

5.15 Costa Rica's private health expenditure ranks among the lowest in Latin America. The extensive social security coverage, a private monopoly on private health insurance and a history of strong public services has kept private spending at around 1.5 to 2 percent of GDP. In fact, a 1999 survey by the University of Costa Rica shows that almost 70% of the population reported using private physicians at some point in the previous six months. Most high cost procedures are, however, performed in the public sector, which lowers private spending in the sector.

5.16 Since the beginning of the nineties the private health care market has experienced strong growth, evidenced by the growing number and diversity of providers. The number of clinical laboratories has increased, new specialized centers and a new private hospital established, there have been limited attempts to introduce prepaid medical care,<sup>20</sup> and an increase in illegal private medical insurance (operating at the margin of the INS monopoly).

5.17 At the same time, public-private partnerships, or public contracting of private providers, have increased as a way for the CCSS to improve coverage and efficiency within the constraints of tight public capital budgets. During the 90s, the private sector became an important provider of services to the CCSS in the areas of diagnostic services, specialized treatment and some surgical services, and primary healthcare coverage through cooperatives for 6% of the population.

5.18 The most recent private health expenditure estimates are based on 1998 data, carried out by the CCSS Economic Studies Department. Picado (2000) estimates that private health expenditure amounted to 69,545 billion colones, close to 1.9% of the 1998 GDP (Table 5.5). On the other hand, the public/private composition of expenditures indicates that close to 26% of total estimated health expenditures in 1998 was in the private sector. In order of importance, the main items of private expenditure are medication (34.2%), dental services (27.6%) and visits to the doctor's office (24.6%).

**Table 5.5. Costa Rica: Private and Public Expenditure in Health, 1998 (millions of colones)**

Type of Expenditure	Private expenditure				Public	Total
	Households	Employers	Others (1)	Total	Expenditure	
Medical visits	13,468	3,656		17,124	47,137	64,261
Laboratory examinations	4,418			4,418	6,908	11,326
Dental services	19,183			19,183	1,167	20,350
Hospitalization	2,340			2,340	67,652	69,992
Medication	23,782			23,782	15,119	38,901
Medical insurance	617			617		617
Others (2)			2,081	2,081	58,382	60,463
<b>Total</b>	<b>63,808</b>	<b>3,656</b>	<b>2,081</b>	<b>69,545</b>	<b>196,365</b>	<b>265,910</b>
<b>% of the total</b>	<b>24.0</b>	<b>1.4</b>	<b>0.8</b>	<b>26.2</b>	<b>73.8</b>	<b>100.0</b>
<b>% of the GDP</b>	<b>1.8</b>	<b>0.1</b>	<b>0.1</b>	<b>1.9</b>	<b>5.5</b>	<b>7.4</b>

1/ Includes NGOs

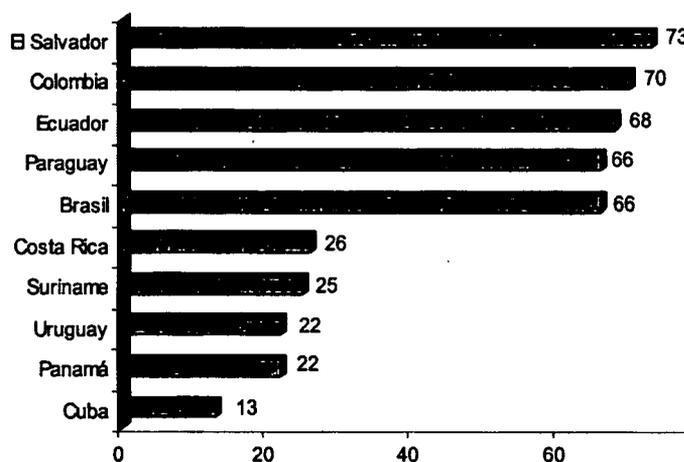
2/ Health Expenditures not detailed

Source: Picado, Gustavo and Katty Sáenz. "Estimación del Gasto Privado en Servicios de Salud en Costa Rica. CCSS, 2000."

<sup>20</sup> It is important to point out that the only company formally offering local pre-paid medical plans was forced to close down because it faced serious financial problems.

**Figure 5.1**

Latin America: Private health expenditure for the five countries with highest and lowest percentage.



Source: PAHO, 1998. % of private expenditure

5.19 The share of private health expenditure estimated by Picado (2000) for 1998 coincides with a 1995 OPS estimate (OPS, 1999), but is slightly higher than estimates by Kleysen (1992) for the year 1986 (20%) and by Sáenz and León (1992) for 1998 (20.1%). While these studies all have slightly different methodologies, it is clear that private sector participation has increased. Assuming that 26 percent is private sector spending, Costa Rica is among the lowest in Latin America, and considerably less than El Salvador, Colombia, Ecuador, Paraguay and Brasil (Figure 5.1).

### Internal efficiency

5.20 The efficient use of public resources is critical to maintaining the incentive to contribute to a social security system based on contributions—a sense of low efficiency would contribute to a low incentive to contribute for the population because they would feel that they were not receiving value for money. This section will analyze CCSS internal efficiency indicators throughout the nineties in comparison with reform objectives and the findings of the 1990 World Bank Social Expenditure Report.

5.21 *Real expenditures per capita increased.* The real CCSS per capita expenditure went from 22,205 colones in 1990, to 28,309 in 1999 (Table 5.6), an increase of 27%. One way of evaluating the efficiency of this expenditure would be in terms of its impact on the health of the population; however, health is a complex phenomenon and it is difficult to make input-output determinations.

5.22 *Administrative expenditures remained stable.* Administrative expenditures remained below 4 percent of total CCSS health expenditures throughout the 90's. Administrative expenditures peaked in 1999 but averaged around 3.5 percent throughout the decade.

**Table 5.6. Real per capita expenditure and CCSS expenditure on administration, 1990-1999**

Year	Per capita Expenditure	% of expenditure on administration
1990	22,205	3.1
1991	21,038	3.8
1992	20,953	3.9
1993	24,587	3.1
1994	25,211	3.5
1995	24,780	3.6
1996	25,161	3.5
1997	24,598	3.2
1998	26,062	2.9
1999	28,309	3.8

SOURCE: CCSS, Statistics Department, and own calculations.

**Table 5.7. Cost per medical visit and per stay, 1990-1999  
(in 1995 constant colones).**

Year	Cost per visit	Growth percentage	Cost per stay	Growth percentage
1990	3,538	24.9	17,263	14.6
1991	3,707	4.8	17,088	-1.0
1992	3,740	0.9	20,136	17.8
1993	4,084	9.2	18,420	-8.5
1994	4,368	7.0	23,200	25.9
1995	3,924	-10.2	23,301	0.4
1996	3,823	-2.6	21,541	-7.6
1997	4,267	11.6	22,048	2.4
1998	4,628	8.5	25,400	15.2
1999	4,455	-3.7	27,995	10.2

SOURCE: CCSS, Statistics Department, and own calculations.

5.23 *The cost of medical visits and hospitalization increased.* Table 5.7 shows that the cost per visit and cost per hospitalization rose significantly over the period. In 1990, each outpatient visit cost 3,538 colones (approximately US\$ 12.4 in 1995), by 1999 the average cost had risen to 4,455 colones (US\$ 15.6 in 1995). In real terms, the cost per visit and per stay increased by 26% and 62% respectively during the decade.

5.24 *The real cost per insured person increased.* The average expenditure per hospital discharge and per insured person increased by 32% (from 11.5 to 15.3), while the

expenditure per visit increased 37% during the decade (from 7.9 to 10.8, Table 5.8). These cost figures include expenditures on complementary services: medicine, laboratory and diagnosis/x-rays.

**Table 5.8. Cost per Discharge, per Bed Day and per Consultation per insured person, 1990-1999**

Year	Real cost per stay	Stays per discharge	Real cost per discharge	Discharges per 100 insured members	Real cost of discharge per insured person	Real Cost of Consultation per insured
90	17.3	6.0	103.8	11.2	11.6	7.9
91	17.1	6.1	104.5	10.8	11.3	8.3
92	20.1	6.4	129.6	10.8	14.1	8.4
93	18.4	6.1	112.3	10.6	11.9	8.8
94	23.2	5.7	131.8	10.3	13.6	9.5
95	23.3	5.8	136.2	10.1	13.7	8.8
96	21.5	6.1	131.6	9.5	12.5	8.6
97	22.0	5.9	130.3	9.6	12.5	10.1
98	25.4	5.5	139.7	9.4	13.1	11.1
99	28.0	5.8	162.3	9.4	15.3	10.8

Source: CCSS, Statistics Department, and author's calculations

5.25 The increase in the real cost of a hospitalization stay was not offset by a reduction in the average length of stay (ALOS) per discharge. This led to a real increase in cost per discharge from 104,000 colones to over 160,000 colones by the end of the decade. The reduction in discharges per insured person was insufficient to prevent expenditures per insured person from increasing from 11,500 colones to nearly 15,300 colones during the analysis period (an increase of about 32%). The causes of decreasing hospitalization may be better primary care services, technology improvements in allow more ambulatory solutions and better use of pharmaceuticals. It is clear, however, that the average cost per discharge has increased, perhaps reflecting the increasing cost of technology and pharmaceuticals, along with rising wage costs. The real cost per outpatient visit also increased nearly 30% over the decade, from 8,100 to 10,600 colones. Possible causes of the increase in costs per stay and per medical visit are investigated below.

5.26 One element that influenced real expenditures per insured member is spending on specialist services and emergencies. Because the average cost of dental visits, emergency visits and visits to

medical professionals is unknown, these are not included in the cost indicators previously analyzed. Table 5.9 shows utilization rates for specialty services and emergency visits. Specialist visits increased by 25 percent over the decade, and emergency visits nearly doubled. Per insured person, the increase for specialist visits was less than 5 percent.

**Table 5.9. Utilization of specialized medical services and emergency visits, 1990-1999**

Yr	Visits		Specialist + other	
	Specialists + other professionals	Emergency	per Insured	Emergencies per insured
90	3.04	1.5	1.1	0.6
91	3.13	1.6	1.1	0.6
92	3.26	1.8	1.1	0.6
93	3.15	1.8	1.1	0.6
94	3.19	2.0	1.1	0.7
95	3.36	2.1	1.1	0.7
96	3.47	2.3	1.1	0.7
97	3.73	2.5	1.1	0.8
98	3.84	2.8	1.1	0.8
99	4.01	3.0	1.2	0.9

NOTE: visits in millions, visits/insured member in units.

1/Includes external visits to specialists, dentists and other professionals.

SOURCE: CCSS and own calculations

Emergency visits increased from 0.60 to 0.92 visits per insured member per year during the decade (an increase of 53%)., *Ceteris paribus*, this induced an increase in real expenditures per insured member. It is important to mention that utilization of emergency services is related to waiting times<sup>21</sup> for programmed visits. Studies consistently show that over 40 percent of all emergency visits are not real emergencies but rather a "faster" way to access primary care or specialist services.

**5.27 Increasing use of general practitioners and ambulatory services.** The strengthening of the

PHC model through the EBAIS has led to improvements in the distribution of services and to a more efficient use of resources at the local level. This reverses a trend observed in the 1990 World Bank Report, paragraph 3.22 iii, that indicated that increasing specialization was increasing expenditures per insured member. Table 5.10 shows that the ratio of GP visits to specialist visits improved considerably from 1994 onwards. In addition, the number of visits per discharge increased, indicating a marked decline in hospitalization, and medical referrals to specialists. Tables 5.8 and 5.9 confirm these trends.

**Table 5.10. Medical visits and expenditures, 1990-1999**

Year	External visits			Gen.Med. /Specialists	Gen.Med. / Specialist + other prof.	Visits <sup>2</sup> per Discharge
	Medicine General	Specialists	Other professionals <sup>1</sup>			
90	3.62	2.19	0.85	1.65	1.19	28.23
91	3.72	2.27	0.86	1.64	1.19	29.52
92	3.78	2.35	0.92	1.61	1.16	29.70
93	3.76	2.29	0.86	1.64	1.19	29.48
94	4.00	2.29	0.90	1.74	1.25	31.39
95	4.23	2.38	0.97	1.78	1.26	32.94
96	4.57	2.46	1.02	1.86	1.31	34.78
97	4.86	2.63	1.10	1.84	1.30	36.57
98	5.35	2.47	1.37	2.17	1.39	39.26
99	5.58	2.48	1.53	2.25	1.39	40.32

NOTE: millions of visits, except the ratios (final 3 columns).

1/Includes dentists, psychologists, nurses and dieticians.

2/ Includes emergency visits

SOURCE: CCSS and own calculations

<sup>21</sup> Facilities keep statistics on waiting times for programmed visits. However, at central level there is no consolidated information on waiting times.

5.28 **Real expenditures for medications per insured member have remained constant.** Table 5.11 shows the real expenditures on pharmaceuticals per insured member. These expenditures did not increase over the 92-98 period, but there was a notable increase in 1996 when many reforms were implemented. Expenditures on medications have not contributed to the increase in hospitalization and medical visit costs.

5.29 From the point of view of internal efficiency analysis, pharmaceutical costs have remained relatively constant. There are, however, problems with acquisition, administration and supply that affect costs. Some of the most important are: problems in the supply of essential drugs at all levels of care; administrative delays by the CCSS Pharmacotherapy Department in authorizing purchases in the private market; rising costs of purchasing pharmaceuticals in the private market when government stocks run out; lack of an adequate inventory handling and planning system; and planning problems related to low awareness of consumption patterns and the real costs of medications. Improving efficiency in the purchase and distribution of pharmaceuticals is a priority area within health sector reform.

**Table 5.11. CCSS. Expenditures on Pharmaceuticals 1992-1998 (billions of 1995 colones)**

Year	nominal	real		
		amount	/insured mem.	% increase
92	5.1	7.3	2.7	
93	5.5	7.2	2.6	-3.3
94	6.3	7.2	2.5	-3.0
95	7.2	6.7	2.3	-8.8
96	10.7	8.5	2.7	19.3
97	9.1	6.4	2.0	-25.3
98	13.8	8.6	2.6	30.8

NOTE: Amount per insured member in thousands of 1995 colones.  
SOURCE: CCSS; IPC: BCCR website.

5.30 **Human resource hiring schemes have not changed.** Despite the introduction of management contracts, medical professionals continue in a worker-employer relationship with the CCSS (see appendix Table 5.3). In order to modernize human resource management, it is necessary to modify selection and recruiting procedures, and to develop new contractual schemes to promote flexibility and efficiency.<sup>22</sup>

5.31 **The CCSS model provides inadequate risk distribution.** Efficient distribution of the risk associated with illness requires that all the health system's economic agents, namely, users and insurance and health providers, share the risks of illness. However, in the current system, the health insurer, the CCSS, takes on most of the risk, while users bear only residual risk in transportation costs, waiting time, and in the case of those not on a payroll, foregone income and out-of-pocket spending. None of the instruments that could redistribute the risk more efficiently have been implemented in the current health system. Potential instruments include per case payment for hospitals through DRGs, capitated contracts for primary care (risk redistribution between the insurance provider and the care provider), and co-payments and limits on payment per episode (redistribution of the risk between the health provider and the user). The management contracts signed by the six health cooperatives are an exception.

## HEALTH SECTOR REFORM

5.32 The necessity for general health sector reform was recognized in the 1960s and 1970s with the proclamation of universal coverage. It was not until the 90s, however, that a systematic approach to reform the health system began to be adopted.

5.33 The main problems that motivated the reforms include: (i) fragmentation of the system's structure, organization and functions; (ii) deficiencies in the regulatory framework; (iii) inequitable and

<sup>22</sup> See Ana Sojo: *Reformas de gestión en salud en América Latina: Los cuasimercados de Colombia, Argentina, Chile y Costa Rica*. Políticas Sociales, Serie 39, CEPAL, Santiago de Chile, 2000; pages. 50-51.

inefficient resource allocation; (iv) deficiencies in service programming, caused by excessive management centralisation; (v) lack of a mechanism to regulate demand; (vi) discontinuity in user care, caused by the lack of referral and counter referral schemes and by medical overspecialization; (vii) user and provider dissatisfaction; and (viii) limitations in human resource training.

5.34 The health sector reform delineated four areas for improvement: i) changes in the system's organizational model, which outlines and creates a foundation for the reform; ii) redesign of the CCSS's financing system, in order to extend contributory coverage and reduce contribution evasion and outstanding payments; iii) changes in the organization and financing of the provider network, to increase efficacy and efficiency; and iv) introduction of a new health care model, which begins to articulate a model that includes well-integrated preventive and curative services, and a focus on health outcomes. The four reform fields are closely linked and complementary. Below is a description of each of these areas of reform.

5.35 The health sector's *institutional reorganization* sought to specialize and strengthen the functions of MOH and CCSS. MOH's management and regulatory functions were to be strengthened; and in the case of the CCSS, financing functions separated, purchase and provider functions clearly delineated, and a new organizational structure created for managing health services at regional and local levels. Inside the CCSS, the reorganization also aimed to encourage an administrative and functional separation of the health and pensions branches. The MOH was to prioritize preventive and primary health care as part of a strategy to improve health outcomes and reduce the share of spending going to secondary and tertiary health care.

5.36 *The financing reform* concentrates on two areas: i) *increasing the coverage of contributions* by applying stricter obligations on wage earners to contribute to the CCSS, more effective evasion control and extending contributory coverage to independent workers; and ii) *redesigning the financing model*, in order to attain greater contribution transparency and harmonization, including redefining contribution rates for independent workers and retired persons, and modifying the government's CCSS contribution for the poor and uninsured.

5.37 *Organizational and resource allocation* changes in the provider network focused on introducing a population based model of primary care, organized around the concept of basic health teams, and increasing decentralization of providers at all levels. The new model assigns management responsibility and authority to decentralized health areas and to hospitals. To complement these changes, the resource allocation scheme was gradually changed to shift resources in line with the population's needs rather than being driven by the supply of services. In the future, the resource allocation model aims to incorporate competitive mechanisms among health service providers in order to encourage efficiency improvements. These mechanisms include free choice of provider for certain treatments and services, billing among different providers, and the introduction of public information systems on the comparative performance of service providers.

5.38 At the end of the eighties a new resource allocation mechanism was introduced. Contractual mechanisms were established, and autonomous health cooperatives were contracted on a per capita payment basis. In addition, in 1997 management contracts were introduced as a planning and resource allocation instrument.<sup>23</sup> For Health Areas, the contracts set payments based on historic per capita expenditures for primary care, while for hospitals they establish payments per activity based on the Hospital Production Unit (UPH). The budget assigned to each hospital is subject to their delivering agreed levels of activity, reflected in the UPH annual volumes. Under the scheme, 10% of the value of

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<sup>23</sup> The contracts with the self-managing health cooperatives were also called 'Management Commitment'. These, however, are in the conditions of contract and are governed by specific legal guidelines.

each UPH is retained in an incentive or compensation fund, whose payment is subject to fulfillment of quality and organizational goals established in the contract. By 1999, 21 hospitals, 34 Health Areas and 6 cooperatives had signed management contracts and for the year 2001 all health providers (29 hospitals, 92 Health Areas and 6 cooperatives) had management contracts with the CCSS .

5.39 *The new health care model* defined as part of the reforms is characterized by an integrated and continuous approach to care to promote the health of people and the environment, with an emphasis on promotional and preventive actions implemented by primary care providers. The population was divided into 92 health areas, with each geographic area averaging 40,000 to 50,000 people. Each health area provides support services of key specialists (in pediatrics, obstetrics, mental health and dermatology) as well as diagnostic services (lab and x-ray, predominantly). These Health Areas (*Areas de Salud*) were in turn subdivided among basic health teams, *Equipos Basicos de Atencion Integral de la Salud (EBAIS)* consisting of 1 physician, 1 nurse and 1 primary care technician. The EBAIS provide coverage to between 1,500 and 4,000 people depending on the geographic conditions. Social participation is widely promoted in three areas: self-care, implementing community activities for health promotion and prevention, and planning and management evaluation of health services.

5.40 A national health plan (*Plan de Atencion de la Salud a las Personas, PASP*) was developed based on an analysis of the health priorities at national level. The analysis established twelve priority programs including: acute respiratory infections, intestinal infections, arterial hypertension and cerebral-vascular disease, uterus and breast cancer, diseases that can be prevented by vaccination and pre-natal care. These priorities are integrated into five programs: Integrated Care for Children, and Care Programs for Adolescents, Women, Adults, and the Elderly, developed by the three levels of care. The management contracts then incorporate specific targets for each program.

### **What did the Health Reforms Achieve?**

#### **Institutional Reorganization**

5.41 *The CCSS and MOH progressed toward separation of functions.* The Health Sector's institutional reorganization which began in 1996 with the separation of CCSS and MOH functions aimed to transfer financing and provision functions to the CCSS and define the MOH as a policy making and regulatory body. The MOH remains the health sector's principal steward and regulator, while the CCSS deals with health insurance and health service provider functions at the three levels, including the health promotion and prevention services traditionally offered by the MOH. The MOH aims to consolidate its stewardship and regulatory roles. Its new structure defines new processes to monitor and evaluate health services. Guidelines, regulations, and inspection mechanisms are generated, and results are disclosed. The most important objectives established by the MOH are to establish a national quality and accreditation program, provide support to health sector public institutions' continuous quality improvement programs, and promote social participation that enables coordination between communities and health services providers. Since the mid-nineties, primary care workers began to be transferred from the MOH to the CCSS to facilitate increased specialization by the CCSS as a provider. This process was completed in 1999.<sup>24</sup>

5.42 *Development of the regulatory function has begun.* The MOH has made efforts to assume a stronger regulatory role. The MOH promoted efforts to introduce health services evaluation as a new function within its regulatory role, oriented toward evaluation of quality of process and outcomes, both

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<sup>24</sup> By the end of 1999, 1,535 MOH workers had been moved to CCSS primary level care programs. They accounted for 4.9% of CCSS employees in 1999 and an annual salary cost of close to 3.8 billion colones, representing 2.1% of CCSS total expenditure and almost 4.9% of the CCSS payroll.

for public and for private providers. The practical results of this process are not yet documented, but there are indications that it will require time to achieve its objectives.

5.43 The accreditation process<sup>25</sup> was initiated in 1996, and first applied in the CCSS maternity wards. The process is centered on a structure based evaluation, concentrating on conditions rather than outcomes or processes. Accreditation is voluntary for private health service providers and is still being introduced in public health establishments. So far, only public maternity wards have adopted it, and it needs to be expanded to other public and private providers.

5.44 Although voluntary, one of the main accreditation policies<sup>26</sup> recommended by the MOH is its separation from other types of incentives that would make it more appealing to consumers. Theoretically, the objective of accreditation is to be a health market “signal”, in which accredited providers would be expected to attract greater demand for their services. Information disclosure becomes of strategic importance. However, the Ministry has not taken on this function yet, and furthermore, the General Health Law is limited with respect to regulations for provision of information to users.

5.45 ***The CCSS made limited progress in reorganizing its central administration.*** In 1994 the CCSS created a Pensions Vice Presidency, which assumed management of a group of internal processes -- registration, procedures and pensions payment. This was critical to increasing the separation of risks and functions and promoted more transparency in the management and financing of the general administration expenditures for health and pensions. The remaining work focused on separating the CCSS's three basic functions within its organizational structure: financing, purchasing health services and provision of services. In order to fulfill the objective of separating these functions, three changes were made: (i) a health services Contracting Department was created in 1999, with specialized functions in health service planning and contracting; (ii) the CCSS created a Health Services Superintendence; and (iii) in 1998 the CCSS Hospitals and Clinics Decentralization Law was passed (Law Number 7852).

5.46 Even though the creation of the Contracting Department represents a step in the right direction, its direct dependency on the CCSS Administrative Vice Presidency, without a direct link to the Financial Division which controls the budget, limits the complete separation of the planning and purchasing processes needed for optimal financial and budget management. In addition, this department lacks the support instruments to efficiently fulfill its functions, especially related to development of purchasing plans and evaluation of management contracts. On the other hand, the Finance Vice Presidency continues to carry out double functions, affiliation-collection (financing) and budgeting (purchasing and resource allocation). The CCSS still faces the task of carrying out a complete organizational restructuring at the central level, to enable a transparent definition of the internal processes necessary for completing the separation of functions.

5.47 The creation of the Health Service Superintendence also represents a step in the right direction toward control and supervision of health providers, however as part of the CCSS, this body has inadequate functional and political autonomy to fulfill its objective.

5.48 ***There was progress in institutional reorganization at regional and local levels.*** As part of the reform process, “Health Areas” were created using accessibility criteria, population distribution and political-administrative divisions. In March 2001 there were 87 Health Areas with 675 EBAIS covering 70 percent of the country's population; coverage will increase after inauguration of 113 more EBAIS.

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<sup>25</sup> Accreditation consists of six steps: (1) initial application, (2) previous advice, (3) self-evaluation, (4) auditing, (5) auditing report and recommendations and (6) resolution.

<sup>26</sup> Accreditation falls within Public Administration, explained in article 8 of the Competition Promotion and Effective Consumer Defense Law.

5.49 ***Normative instruments were created to support decentralization.*** The “Decentralization Law” and its regulations constitute the normative basis for the separation of functions in service provision and procurement of services. Among other aspects, they include the creation of Health Boards; they also confer instrumental legal entity on the “decentralized entities” (hospitals, clinics and health areas), through signing the management contracts, which gives them budgetary, procurement, administrative and human resource management autonomy.

5.50 One of the most important conditions the law and its regulations establishes, is that hospital and clinic directors take on a hierarchical position and answer to the CCSS Board of Directors for the fulfillment of management contracts. Directors are named for five years and can be reelected or discharged from their position as directors in cases of non-compliance with contracts. Furthermore, it establishes the possibility of audits of hospitals and clinics by the CCSS Central Administration if they do not adhere to guidelines and management contracts.

5.51 The Decentralization Law gives hospitals and clinics the power to procure goods and services, including direct purchase of medicines in the market when required. They are authorized to do internal budget modifications and to negotiate external modifications, as long as they adhere to the economic limits set in the management contracts. The efficiency of the decentralization process will depend on the development of better internal managerial capability, a situation that is less serious at hospital level.

5.52 The law creates Health Boards with seven members (three members represent the insured persons in the center’s catchment area, two represent social groups and there are two employer delegates). The objective is to promote local community participation in management, control and supervision. The Health Boards are currently in the introductory phase and their impact has yet to be evaluated.

5.53 The advances in institutional reorganization are significant but more needs to be done. The MOH must take additional steps to consolidate its regulatory, control and supervision faculties, and to provide public information. The CCSS still needs a complete internal reorganization at the central level, leading to a complete separation of the financing and purchasing functions. With respect to service providers, the CCSS has the challenge of implementing the decentralization law: namely, strengthening local budget management capability; transferring local management risk to providers (internal), and assuring that Health Boards are operating in all of their establishments.

### **Coverage and utilization of health services**

5.54 This section reviews trends in utilization and coverage of health services. The analysis of health service utilization uses data from the 1998 Household Survey<sup>27</sup> and considers critical issues facing the Costa Rican health care market, including the structure of supply and demand, and equity of access.

5.55 ***Utilization of private health services is low.*** Private health services are limited in Costa Rica in comparison with Latin American countries,<sup>28</sup> and display an unusual structure by level of care. In 1998 the private sector accounted for only 16% of medical visits, both general and specialized, and provided very limited hospital services (Table 5.12). This is the result a near total domination of specialized hospital services in the CCSS.

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<sup>27</sup> The 1998 Household Survey includes questions about use of health services in the six months previous to the Survey; the kind of services, visits and hospitalizations, and other questions about the health sector. Based on the sampling data per semester, visit and discharge rates per inhabitant are obtained and then converted to an annual basis.

<sup>28</sup> On average in the America region in 1995, estimated expenditures are 41% public and 59% private; very different from the Costa Rican composition of 74% public and 26% private. See: OPS, La Salud en las Américas. 1998 Edition, Volume I, pg. 334.

**Table 5.12. Global health service utilization indicators by sector, 1998.**

Indicator	Total	Public	Private
Proportion of visits (%)	100.0	83.7	16.3
Medical visits per inhabitant	2.6	2.2	0.4
Hospitalized persons (%)	100.0	99.98	0.02
Hospitalization rate (x 100)	8.1	7.9	0.1

Source: 1998 Household Survey

**5.56 The regional distribution of health services mostly benefits the rural population.** Ambulatory and hospital services offered by the public sector are higher in rural areas, which together with other indicators analyzed, represent one of the greatest achievements of the Costa Rican health system. According to the Household Survey, in 1998 visits per person to public establishments in rural areas were slightly higher than in urban areas, 2.7 and 2.5 visits per inhabitant, respectively; and the public hospital discharge rate was 8.7 hospitalizations per every 100 inhabitants in the rural zone, and 6.9 in the urban zone.<sup>29</sup> The private medical visits rate is much lower than the public rate in both urban and rural areas. Users of private ambulatory services tend to be concentrated in the urban zone: the private visit rate is 0.6 in the urban zone and 0.3 in the rural zone. Adding private and public visits, the urban utilization rate about equals the rural rate. This is not the case for hospital services where services utilization is higher in rural areas (Table 5.13).

**Table 5.13. Utilization of ambulatory services by rural/urban zone, 1998.**

Indicator	Total	Urban	Rural
Proportion of visits (%):	100.0	40.8	59.2
Public	100.0	37.4	62.6
Private	100.0	58.1	41.9
Visits per inhabitant:	2.6	2.5	2.7
Public	2.2	1.9	2.4
Private	0.4	0.6	0.3

Source: 1998 Household Survey

<sup>29</sup> It must be pointed out that these service utilization patterns may also be affected by poorer health status among the rural population, although this does not invalidate the findings with respect to equity in access to health care services.

**Table 5.14. Health service utilization rates by insurance status, 1998**

Status of Insured Member	Ambulatory			Hospitaliz. (x 100 inhabitants)		
	Total	Public	Private	Total	Public	Private
Total	2.6	2.2	0.4	8.1	7.9	0.1
Direct Dependent	2.3	1.9	0.4	6.2	6.0	0.2
Direct Independent	2.4	1.9	0.5	8.6	8.2	0.3
By government and relatives	2.0	1.9	0.1	7.6	7.6	0.0
Direct insured relative	2.9	2.4	0.5	8.1	8.0	0.1
Pensioned Non-Contributory Plan	6.0	5.7	0.3	28.1	28.1	0.0
Pensioned Contributory Plan	4.8	3.9	0.9	15.9	15.7	0.2
Relative of pensioned member	3.9	3.5	0.4	8.5	8.5	0.0
Other forms	1.5	1.2	0.2	2.0	2.0	0.0
Not insured	1.4	1.1	0.4	5.4	5.1	0.3

Source: 1998 Household Survey.

**5.57 Being insured does not affect access noticeably.** The relative generosity of the Costa Rican social security system in CCSS service access can be summarized in a few figures: (i) around 30% of the employed labor force does not make Social Security contributions; (ii) close to 40% of the labor force in the private sector resort to types of insurance that involve some contribution evasion mechanism; (iii) almost 60% of the self-employed population is voluntarily affiliated to the CCSS, and (iv) it is estimated that 10% of the national population is not insured.<sup>30</sup> This overview explains why in general, private health service utilization patterns do not show significant differences depending on the health insurance status, except for low income and poor groups (most of whom are in the "Insured by the State" category) and whose private service demand is much lower than the average, as shown in Table 5.14. It is also important to point out that: first, even for the uninsured population,<sup>31</sup> health service demand is concentrated in the public sector, especially for hospitalization services; second, that the pensioned population has high health service utilization rates but not of private sector services, evidence of the fact that private health service prices are not accessible to the majority of the pensioned population, and that in Costa Rica retirees with pension plans have "automatic" CCSS coverage.

<sup>30</sup> See: Durán, Fabio. *Los Convenios de Aseguramiento en Costa Rica*. En: América Latina. Seguridad Social y Exclusión. Adolfo Rodríguez, Fabio Durán (Editors). Costa Rica, 1998. pgs. 145-164.

<sup>31</sup> By definition, the uninsured population are placed in the "not poor" category, therefore, this is a group that could potentially make social security contributions; besides, the care this group receives is covered under Social Security in the form of "direct payment" for services used.

5.58 *Utilization by age shows a typical structure.* Visits per inhabitant and the hospitalization index show a typical distribution, high in the extremes and low in the intermediate ages, which is consistent with the normal epidemiological pattern associated with age (Figure 5.2). However, the greater utilization rate by children and elderly people is by preference directed to the public sector.

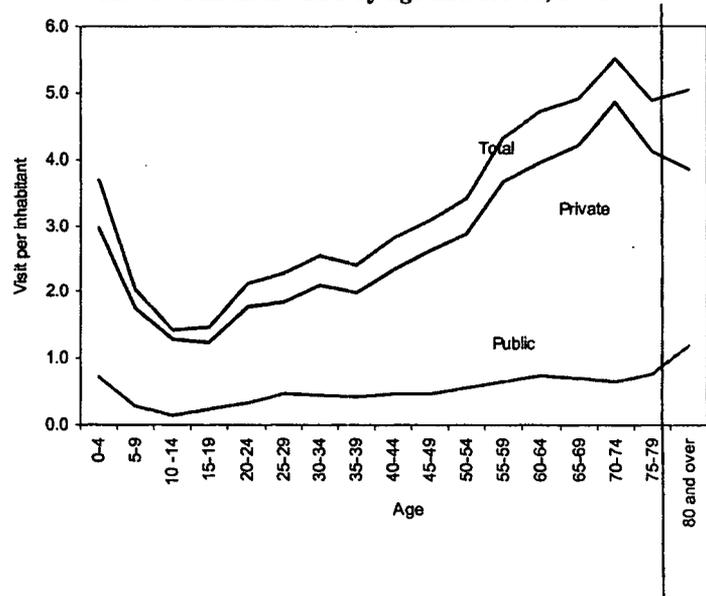
5.59 *The health services utilization rate is inversely related to income level.* Utilization rates do not differ much between poor and non-poor, except that the poor population tends to be hospitalized more than the average. The demand for private services is slightly higher by the non-poor population, but still much lower than demand for public health services.

5.60 Figure 5.3 shows how the public/private distribution of demand for health services exhibits decreasing visit rates by income level in public health establishments, and that rates decrease slightly with per capita family income. In epidemiological terms, this correlates with the better health status that persons with higher incomes have, on average.

5.61 Public sector service utilization trends might indicate several inter-related phenomena. First, that the lowest income groups are more likely to be ill than the average. Second, transportation expenses and opportunity costs that arise from the time required to obtain services in a system where demand is regulated fundamentally by lines and waiting time rather than by prices, reduce demand among higher income groups whose opportunity costs are higher. This helps explain why private visit rates rise with income level.

5.62 One hypothesis is that people with more income, in other words, with greater payment potential, are more prone to the "induced demand" phenomenon that arises from the information asymmetry between physician and patient, which in part explains why private visit rates are highest for the top deciles in the income distribution.<sup>32</sup>

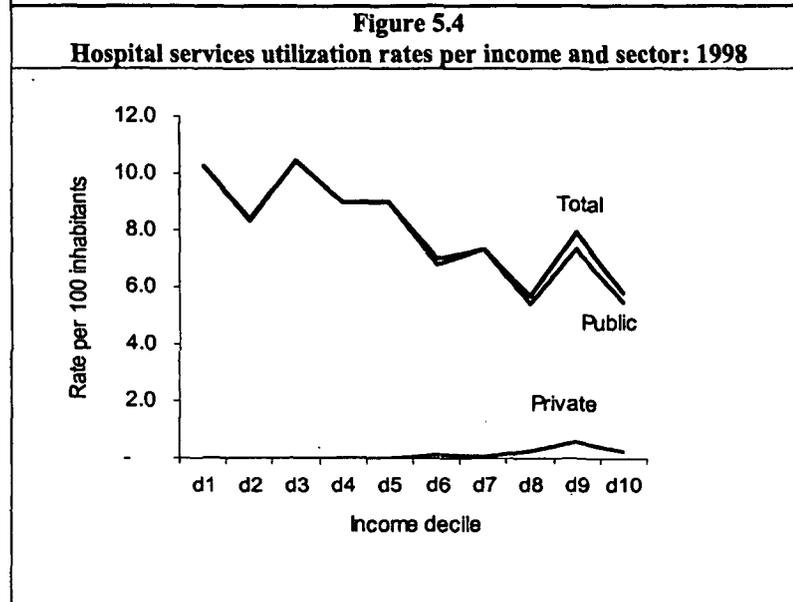
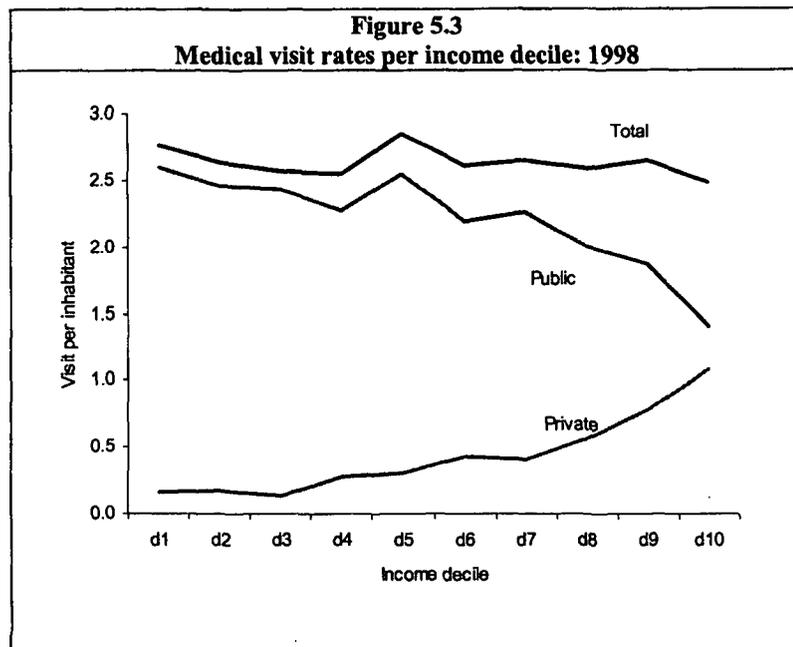
Figure 5.2  
Rates of medical visits by age and sector, 1998



<sup>32</sup> According to this hypothesis, the information asymmetry is a phenomenon that would affect persons of all income groups equally, including more educated people in high income groups. Greater payment capability becomes a criterion used by physicians for inducing greater service utilization.

5.63 Public hospital service utilization rates and the global rate also show an inverse relationship with respect to income. Private hospital services utilization rates are very low although these is some minimal increase at higher income levels. Comparison with use of private ambulatory services, the low use of private hospital services even for the highest income groups (Figure 5.4) may be the result of a combination of factors. First, access to public hospital services is relatively higher than to public ambulatory services. Second, most people consider the quality of public hospital services to be adequate.<sup>33</sup> Third, costs for these services are high and their private financing is not within reach of most people. Fourth, most public hospital physicians also work in the private sector, and refer their private patients to public hospitals, levying illegal fees, the so called “biombos”, for the use of public facilities, in exchange for better access and differentiated services, basically lodging.<sup>34</sup> Lastly, private hospital services are restricted by the presence of a relatively developed public hospital system that leaves little space for the private sector to develop.

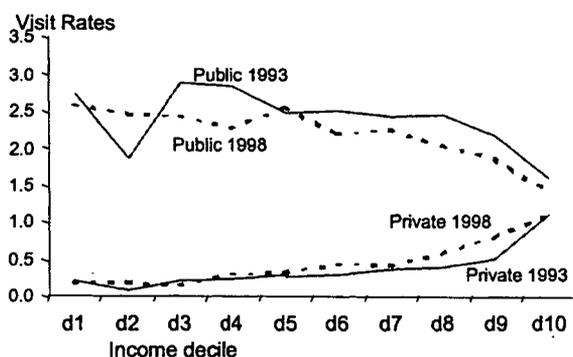
5.64 The previous exposition leads us to the hypothesis that in Costa Rica the demand for private health services — especially ambulatory services — operates as a mechanism for filling the gaps in access to public sector health care, mainly in ambulatory care and mostly by groups with greater payment capability. Furthermore, it is possible that the “biombo” problem



<sup>33</sup> In the 1997 Satisfaction Survey, users give an average rating of 8.6 (measured on a 0 to 10 scale), to eleven hospitalization service quality variables. See: CCSS, Proyecto de Modernización. Estudio de Opinión de los Servicios de Salud de la CCSS, 1997. Informe de Consultoría EYMSA Estadísticas y Mercadeo.

<sup>34</sup> A detailed exposition on the magnitude of the problem of corrupt medical practice of “biombos” or illegal fees in the Costa Rican public hospitals is found in: Cercone, James; Durán, Fabio y Muñoz, Erlend. *Compromisos de gestión, rendición de cuentas y corrupción en los hospitales de la Caja Costarricense de Seguro Social*. La Academia de Centroamérica – Instituto Latinoamericano de Políticas Públicas. Banco Interamericano de Desarrollo, Quinta Ronda de Estudios: Transparencia y Rendición de Cuentas en los Hospitales Públicos de América Latina. San José, Costa Rica, 2000.

**Figure 5.5. Public and private visit rates  
1993 and 1998**



are also the most expensive, have a good reputation among most people and are used by nearly 100 percent of the population.

### Comparisons between 1993 and 1998

5.66 As part of the study, information on utilization of medical services from the 1993 Household Survey was processed, however, a methodological problem with the questions on utilization of hospital services leaves the information available for use incomplete. With respect to medical visits, the survey inquired about the number of visits in the previous six months and the (public/private) sector site of the last medical visit. There was no specific question as to the number of visits in each sector, so the public and private visit rates were roughly estimated multiplying the total visit rate by the proportion of persons whose last visit was in the public or private sector. The results are discussed below.

5.67 *There are slight changes in the demand structure between 1993 and 1998.* The medical visit distributions by public/private sector, by income decile, per capita, residence, gender, zone, level of poverty, age, etc., derived from the 1993 Survey are similar to those obtained for 1998 (Figure 5.5). There was a slight increase in demand for private services among the wealthiest 30 percent of the population and a general trend toward reduced public sector utilization.

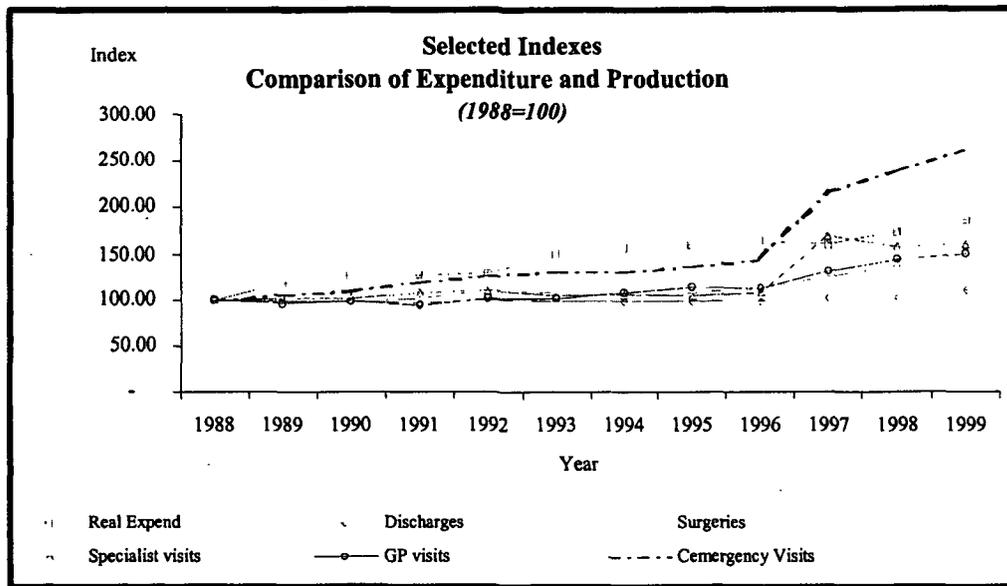
5.68 *There was a reduction in the rate of visits per inhabitant and a change in the public/private distribution.* The 1998 global visit rate per inhabitant was 4% lower than the 1993 rate, which is within the sampling margin of error. However, the public visits rate is 8% lower in 1998 than in 1993, whereas private visits increased by 20% (Figure 5.5). This change in the demand composition between 1993 and 1998 differs noticeably across income groups; it is mainly people with higher incomes who increased their use of private medical visit services, people from rural areas, women of reproductive age, pensioned people with contributory plans, the groups classified as “not poor” and children under five years old. On the other hand, groups that show a significant decrease in the private visit rate between 1993 and 1998 are: the lowest and third lowest income deciles, people insured by the State, the uninsured population, and people in the “extreme poverty” group.

5.69 *Hospital productivity improved.* The introduction of a production based budget (*Compromiso de gestión*) produced important increases in total hospital output. After several years of stagnation, figure 5.6 shows that productivity increased from 1997 onwards. The figure also shows that emergency visits increase more rapidly than other categories indicating a growing problem with access to outpatient visits and waiting lists. It is important to mention that the increase in productivity has not necessarily been positive as many of the increases appear to have been offset by a decrease in the complexity of cases.

masks a true comparison of service utilization in the public and private sectors by hiding cross-subsidies between the public and private sectors.

5.65 *Utilization of services and financing incentives.* The CCSS financing is through a tripartite payroll tax on salaries, with a greater burden on middle and high income groups. To the extent that groups that contribute to the financing increasingly seek private health services rather than use the public services they have paid for, they represent a risk to the system’s financial sustainability in terms of their willingness to pay through contributions. In Costa Rica this is minimal because public hospital services, which

Figure 5.6 Hospital Productivity



## Equity

5.70 ***Inequities persist in maternal and infant health.*** A study carried out by the Panamerican Health Organization (OPS)<sup>35</sup> highlights various inequalities in maternal and infant health. The study is based on Demographic and Health Surveys in 1992 and in 1999 by CCSS and the Central American Population Program respectively. The results show clear social-economic differences in several health indicators,<sup>36</sup> more evident at individual level than at community level. The biggest gaps are for the lowest income groups and there is a high correlation between the education level of survey respondents the size of the indicator inequities. The indicators of access to and use of family planning show the greatest inequity (see appendix Table 5.4)

5.71 ***The CCSS distribution of expenditure by decile is practically proportional to income.*** The expenditure subsidies for sickness and maternal care in 1998 are proportional to income levels. Estimated utilization by income is fairly uniform; the lowest income 20% of people use 22.2% of health services and the lowest 50% by income use 55.6% of resources.

<sup>35</sup> Miriam León Solís. "Equidad y salud materno-infantil en Costa Rica". Proyecto ELAC. Investigaciones en Salud Pública. Documento Técnico número 33. OPS, Washington, EUA. Marzo, 2001.

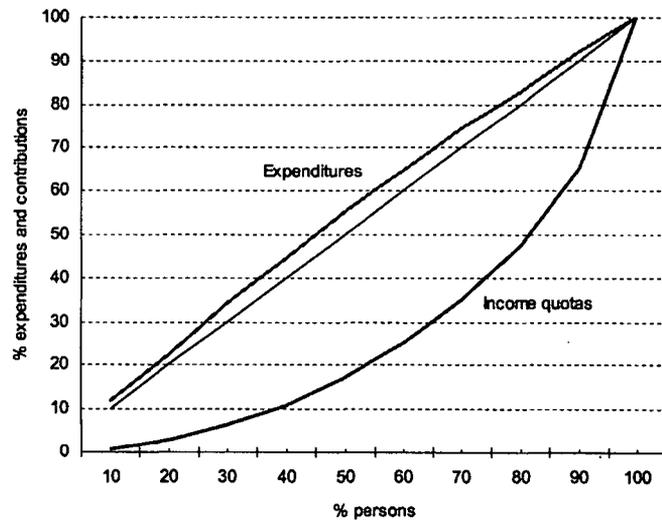
<sup>36</sup> The following aspects were considered in the maternal-infant area: child mortality and morbidity, child growth and development, maternal behaviors that are risk factors, mothers' knowledge and attitudes, prevention, use of services, access and availability of services. For equity two aspects are considered: i) Socio-economic status: urbanization and metropolization; community development; ii) Individual's socio-economic condition: mother's education and household economic stratum.

5.72 *Estimated contributions to the CCSS are highly progressive.* In order to estimate the distribution of the CCSS contributions in 1998, a total monthly income distribution by income decile was constructed for the actively employed directly insured group and for pensioned persons, beginning with the 1998 Household Survey. Because there is under-reporting of salaries to the CCSS, in the case of direct active members, salaries were corrected upwards assuming that under-reporting increases linearly from 5% in the lowest income decile to 30% in the highest decile; this is because there is evidence that workers with the highest incomes under-report their salaries to a greater extent than workers with lower incomes.<sup>37</sup> Table

5.15 shows that the CCSS contribution distribution is highly progressive,<sup>38</sup> with the bottom 20% of the population contributing only 2.9% of the total and people in the bottom 50% of the income distribution contributing only 17.5%. This produces a Gini coefficient of 0.48, shown in figure 5.7.

5.73 The distribution of the estimated direct contributions to the CCSS by insured members in 1998, infers that contributions are proportional to the direct insured persons' corrected incomes. For the correct interpretation of these results it must be noted that: (i) this distribution excludes the redistributive effect of the contribution quota structure, (ii) an a priori under-reporting rate is assumed, proportional to income, for wage earners and voluntary insured members (although it is possible that self-employed workers have a higher under-reporting rate than wage earners) and zero for retired insured members, (iii) the distribution does not consider the redistributive effect of State contributions to the CCSS as insurance provider for pensioned persons with a Non Contributory Plan, as long as the insured members were employed in 1998 and had received an income.

Figure 5.7  
Benefits and contributions to Health Insurance  
by income decile



<sup>37</sup> This procedure assumes that the salary data reported in the Household Survey are higher, on average, than those reported to the Social Security. In order to estimate effective contributions, based on under-reported salaries, an adjustment is required. Without this salary correlation, the estimated redistributive impact would be greater.

<sup>38</sup> Progressivity refers to the payments to the CCSS. Contributions are proportional to the income of the direct insured member.

**Table 5.15. CCSS Redistributive Impact, 1998**

Income decile	Health Insurance Expenditure		Quota workers & pensioned		Expend/Contribut Index
	%	% accumulated	%	% accumulated	
1	11.8	11.8	0.6	0.6	19.7
2	10.4	22.2	2.3	2.9	4.4
3	12.2	34.3	3.7	6.5	3.2
4	10.3	44.7	4.4	10.9	2.3
5	10.9	55.5	6.5	17.4	1.6
6	9.2	64.7	7.7	25.1	1.2
7	9.7	74.5	9.8	34.9	1.0
8	8.3	82.7	12.7	47.6	0.6
9	9.3	92.0	17.5	65.2	0.5
10	8.0	100.0	34.8	100.0	0.2

Source: Fabio Durán, based on 1998 Household Survey, INEC.

5.74 *The CCSS redistributive impact is high.* The relationship between expenditure shares and contributions by income decile, calculated in Table 5.15 imply that total CCSS expenditures and total contributions were identical in 1998. In order to calculate total contributions, wage earners' worker-employer quotas were considered as well as the partial contributions of voluntary insured members and the total contributions of the contributory pension funds according to the CCSS's Technical Incomes and Expenditures Analysis. For 1998 the sum of these quotas was 165,323 billion colones, while total CCSS expenditures rose in 1998 to 151.591 billion colones, which is why the expenditure/contribution ratio can be interpreted not only in the context of health services, but also as the relative contribution of each decile to the CCSS. Thus, it is estimated that the lowest income decile receives 19.7 times more in health services than their contributions by quotas, while the top decile uses one fifth of its contributions in public health services.

### CCSS Financing and Coverage during the 1990s

5.75 Nearly 95 percent of the CCSS financing is generated as contributions from direct insured members. The contribution rate varies by employment status: employers and workers contribute 14.75% of payroll, while self-employed workers contribute from 13.75% to 5.75% of their declared income, a share that the State complements up to 9.25% as a subsidy to people with incomes under 100,000 colones. Additionally, the CCSS receives 13.75% of the value of pensions paid to retired people with public contributory plans. The State transfers an additional 0.25% of total salaries for all workers reported to CCSS, which gives a total contribution of 15% for wage earners (paid by employers and workers), of between 14% and 9.5% for self-employed workers and 14% for retired people.<sup>39</sup>

5.76 The State provides the resources to cover nearly a half million poor, who represent nearly 14% of the national population, through an insurance scheme called "Insured by the State" and also by paying the quotas for roughly 70,000 pensioners covered under non-contributory pension plans. The central government contributions through these four forms of participation represented about 8.3% of the statutory incomes of the CCSS in 1998 and in 1999.<sup>40</sup>

<sup>39</sup> Because salaried workers receive sickness and maternity subsidies (disabilities), they contribute one additional percentage point. Informal sector/self-employed workers pay a lower premium and are not eligible for these additional benefits.

<sup>40</sup> This calculation estimates the complementary contribution as a percentage of the global contribution of self-employed workers and insured workers who are covered under special contracts or collective agreements with

5.77 One question that arises is whether state contributions for the “Insured by the State” program are effectively used to cover the indigent population. There is evidence that the average contribution the State makes for each family insured by the State is insufficient for financing per capita expenditures per family: it is estimated that the effective cost for attending the indigent population is close to seven times more than the state contributions to cover this group (in other words, the state contributions only cover 14% of the effective cost).<sup>41</sup> This implies that the state subsidy for coverage of the poor is only partial, and is complemented by a direct subsidy that goes from the active contributing population to the poor population. In other words, in order to finance coverage of the Insured by the State, the government contributes an estimated 5% of the CCSS’s total income, while about 15.5% of total expenditures by the CCSS go for services for these members—equal to roughly 10% of the country’s population. Even if the total state contribution were considered (Contribution for Members “Insured by the State” plus “State Itself”), the state contribution would amount to 7% of total contribution income, still insufficient to cover the cost of the services provided to this group.

5.78 The CCSS contributory coverage, as percentage of the EAP, has increased in the last decade (Table 5.16), but with a trend toward stagnation. It goes from 65% in 1990 to almost 70% in 1996, and then drops to a value close to 67%.

5.79 One of the biggest problems facing the CCSS financing is contribution evasion, both because of salary under-reporting and non-insurance. It is estimated that the CCSS does not collect close to 16% of statutory CCSS incomes because of “non-insurance” of persons obligated to contribute, and loses 10% because of salary under-reporting. Non-insurance is high in small and middle-sized companies: only 25% of workers in agricultural establishments with less than 10 employees contribute to the social security, and in small industries (less than 10 employees), only 36% of workers are affiliated to the social security. This reduces contributory equity.

**Table 5.16. CCSS Coverage, 1990-1999**

Year	Active insured memb. <sup>1</sup>	% of EAP	Other insured memb. <sup>2</sup>	Total insured memb.	% of the population
90	725.8	64.8	1,870	2,596	85.6
91	739.3	66.1	1,931	2,670	85.9
92	790.8	69.3	1,954	2,745	86.2
93	836.8	69.9	1,974	2,810	86.2
94	867.6	69.6	2,008	2,876	86.2
95	890.1	68.7	2,058	2,948	86.4
96	891.9	69.6	2,238	3,130	89.7
97	931.3	68.1	2,225	3,156	88.5
98	974.7	67.4	2,283	3,257	89.4
99	1,026.7	67.3	2,292	3,319	89.2

<sup>1</sup> Active direct insured members

<sup>2</sup> Pensioned persons, insured by the State, and family insured members

Source: CCSS and own calculations

5.80 Even though the Worker Protection Law, approved in the year 2000, grants the CCSS new powers and judicial instruments for controlling evasion, there are three important obstacles to addressing this important challenge: (i) the evasion measurement and monitoring systems are minimally developed; (ii) the contribution control systems applicable to middle-sized and small companies do not comply with

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specific groups (treaties) of 12%. This value is obtained by applying the complementary contribution rates to independent workers’ incomes by income decile of the 1998 Household Survey (the average income of each per capita income decile was used).

<sup>41</sup> See: CCSS, Dirección Actuarial. *Costo de Atención de los Asegurados por Cuenta del Estado, 1994-1995*. October, 1995.

the minimum technical support requirements; (iii) the validation of rights to health services at access points (second and third level) is deficient and does not function as a mechanism to enforce the obligation to contribute.

5.81 In 1996 there were adjustments in the calculations of the poverty line below which everyone has a right to be insured by the State. As consequence, close to 200,000 persons (an increase of nearly 90% of this insurance category) were additionally insured under this condition (see “Others insured”), an increase of three percentage points in the population insured in the CCSS. This placed *contributory coverage* at a level close to 90% of the national population. Since 1996, the “Non-Insured” category has represented between 10% and 11% of the population, mostly persons who prefer to pay for medical services when required.

**Table 5.17. CCSS Contributions, 1990-1999 (billions of colones)**

Year	Contributions totals <sup>1</sup>				Real contrib. /dir. insured <sup>3</sup>	
	nominal	GDP %	real <sup>2</sup>	% increase.		% increase
90	32.2	4.7	72.1		62.9	
91	40.8	4.7	71.0	-1.5	58.3	-7.3
92	53.0	4.6	75.7	6.7	60.9	4.4
93	67.8	5.0	88.3	16.6	71.7	17.8
94	85.4	5.2	97.9	10.9	76.5	6.7
95	104.5	5.0	97.3	-0.7	75.2	-1.8
96	122.1	5.0	96.7	-0.6	64.1	-14.7
97	144.6	4.9	101.1	4.6	64.6	0.7
98	180.4	5.1	113.0	11.8	71.2	10.2
99	209.0	4.8	119.0	5.3	69.7	-2.1

<sup>1</sup> Includes all the SS incomes except interests, fines and others.

<sup>2</sup> January 1995 colones, using the general IPC annual average.

<sup>3</sup> In thousands of colones.

SOURCE: CCSS, except GDP and IPC (BCCR website), and own calculations.

5.82 The *real contribution per direct insured member* shows a slight upward tendency, with several marked variations during the decade. As percentage of GDP, contributions to the CCSS have fluctuated in the last decade between 4.6% and 5.2%, with a high in 1994 (Table 5.17). Due to real increase in salaries, associated also with GDP real growth, contributions have experienced continuous real growth during the nineties, with the exception of 1991 and a stagnant period in 1995/96. The strongest variation occurred in 1993 when the real contribution per direct insured member increased 17.7%. This is explained principally by the “political cycle” of the inflation rate, in which the rate is artificially reduced in pre-election years, such as in 1989 and 1993.<sup>42</sup> This behavior, in combination with the average increase in nominal contributions, is responsible for a 16.6% increase in real contributions. The remaining 1.2% of the total increase is because in 1993 the number of Insured by the State —whose real per capita contribution is lower than that of active direct insured members — fell 22%. The biggest fall in real contributions per direct insured member (14.7%) occurred in 1996 when the poverty line was increased, and the estimated number of Members Insured by the State increased by 16.5%.

<sup>42</sup> The inflation rate in the years previous to the 1998 election were the first in many decades that did not present the typical “political cycle” behavior.

5.83 *Real expenditure per direct insured member* shows an upward tendency (Table 5.18). In the first three years of the decade, the average annual real expenditure per insured member was about 55,000 colones, while in the last three years it was 59,000 colones per year; a 7% increase. However, the variations in real per capita contributions are stabilized by the CCSS on the expenditure side, as shown in Table 5.17. Only the “political cycle” mentioned previously introduces an excessive increase of 22% in 1993, the only year in which there is a change in the stable behavior of real expenditure per direct insured member throughout the decade.

### Overview of CCSS financial sustainability

5.84 *The CCSS financial balance remained stable during the decade.* The CCSS generated a surplus during the nineties, despite the arrears by the central government. This fact strongly contrasts with the expectation of the last World Bank report (1990) that it would not be possible to offset the cost escalation by increasing revenues, leading to an increasing deficit. Despite the 30% increase in medical visits, the 11% increase in expenditure per insured member, and an 8 percent increase in real expenditure per direct insured member, revenues outpaced expenditures. The reason is that the number of insured members per direct insured person decreased rapidly during the nineties, from 1.27 in 1990 to 0.94 in 1999.<sup>43</sup> The proportion of contributors per insured member increased from 44% to 51.5% in that period. Thus, the real cost per direct insured person (CCSS contributors) grew more slowly than the cost per insured member.

5.85 The real contributions per direct insured member increased 16% in nine years (the real GDP per capita growth during this period was almost 32%). In consequence, the difference between revenue and

**Table 5.18. Expenditure and Income per Direct Insured Member, 1990-1999. (000's)**

Year	Insured relatives by				real expendit. / dir.insured <sup>4</sup>	real contrib. / dir. Insured	Contribution minus Expendit.
	act.insured <sup>1</sup>	pen. <sup>2</sup>	act.ins.+pen.	dir.insured <sup>3</sup>			
90	1.9	0.6	1.7	1.3	58.8	62.9	4.1
91	1.8	0.7	1.6	1.2	53.7	58.3	4.6
92	1.8	0.7	1.6	1.2	53.7	60.9	7.2
93	1.8	0.7	1.6	1.3	65.1	71.7	6.6
94	1.7	0.6	1.5	1.2	65.7	76.5	10.8
95	1.7	0.6	1.5	1.3	65.3	75.2	9.8
96	1.7	0.6	1.5	1.1	58.2	64.1	5.9
97	1.6	0.6	1.4	1.0	56.0	64.6	8.6
98	1.6	0.5	1.4	1.1	59.8	71.2	11.4
99	1.5	0.5	1.3	0.9	61.7	69.7	8.0

<sup>1</sup> Active insured/segurado activo (dependent and independent workers) <sup>2</sup> insured pensioned

<sup>3</sup> Supposes all the insured members covered by the State as direct insured members, including relatives.

<sup>4</sup> Includes the relatives' expenditure.

SOURCE: CCSS and own calculations

expenditure per direct insured member grew during the decade from 4,350 colones to nearly 8,700 colones (Table 5.18 and appendix table 5.5).<sup>44</sup>

<sup>43</sup> This phenomenon is explained by two factors. A greater female participation rate in the labor force makes the average spouse per direct insured member lower; second: fertility has been dropping, producing a smaller average number of dependent children per direct insured member.

<sup>44</sup> The abrupt reduction in 1996 of the values and amounts in the four right columns on Table 5.17, is due to the large increase in Members Insured by the State in that year. This group of insured members is considered direct insured, including their families, since the statistics draw no distinction between this insurance status among direct

**Table 5.19. Service utilization rates by age, 1997**

Age group	Visit per inhabitant		Discharges / 1000 inhab.	Average stay
	external	urgencies		
0 < 5	2.8	1.2	100.2	4.9
5 < 10	1.4	0.5	30.9	3.1
10 < 15	1.0	0.4	25.9	4.3
15 < 20	1.5	0.6	82.6	3.1
20 < 25	2.2	0.8	129.0	3.0
25 < 30	2.2	0.7	118.5	3.1
30 < 35	2.4	0.6	109.4	3.7
35 < 40	2.4	0.6	93.8	5.0
40 < 45	2.8	0.6	79.3	6.3
45 < 50	3.2	0.7	74.4	8.8
50 < 55	3.8	0.7	79.3	8.4
55 < 60	4.1	0.7	89.6	10.3
60 < 65	4.4	0.7	108.2	13.5
65 < 70	5.3	0.8	148.7	13.5
70 < 75	5.7	0.9	191.6	11.7
>75	7.3	1.5	321.5	13.7
<b>Average</b>	<b>2.4</b>	<b>0.7</b>	<b>88.7</b>	<b>5.7</b>

SOURCE: CCSS, DAPE, 1997 Projections

represents an informal version of co-payments in combination with, perhaps, a better quality of medical service, both because of the timely service and of the quality of the facility in the case of external visits (generally private medical offices are used).

5.88 The CCSS is considering introducing user co-payments as a financing mechanism. If this mechanism were formalized and standardized, it would undoubtedly have a positive impact in containing health service demand principally because of more self-care and self-medication, and on the CCSS incomes since it would not represent an additional contribution burden.

5.89 *It is important to follow closely changes in the key variable affecting financial equilibrium.* The aging effect on the population of the demographic transition in Costa Rica is felt on two fronts. Income per insured member varies according to the proportion of pensioned persons in the direct insured member category, due to differences in average contribution incomes. Expenditure per direct insured member is affected by a reduction in the number of insured persons per direct insured member and by an increase in health services expenditure per insured member due to the changed epidemiological profile caused by aging (table 5.19).

5.90 The expenditure increase per insured member in the last ten years, due to changes in the age structure, is basically explained by the following factors: (i) increased utilization rate for visits and hospital services (despite the relative reduction of the population under 5 years of age, a group that also has above average utilization rates, Table 5.19), (ii) an increase in the average stay due to the epidemiological change (diseases with above average stays) and (iii) an increase in the unit cost of

5.86 *Waiting time are a mechanism for containing expenditure.* One of the factors that has helped contain expenditures is the increase in waiting lists. Over the decade, waiting lists grew, to over 18 months for many services, constituting an important element limiting demand and diverting some demand to the private sector. According to the UCR-CCSS annual survey, in 1999 over 67% of the population reported being forced to pay private doctors, partially motivated by long waiting lists.

5.87 *The "biombos" are a mechanism for containing expenditures and for avoiding waiting lists.* Waiting times in the different CCSS medical services cause the emergence of the so called "biombos", where the health professional is paid directly by the user while complementary services (medication, laboratory services and diagnosis/x-rays) are obtained through the CCSS. According to the annual UCR-CCSS survey, in 1999 this practice had been proposed by physicians to 15% of the population. From the CCSS financing point of view, this practice

insured members and relatives. This is why the number of relatives insured per direct insured member drops, because the State contribution to the Insured by the State is less than the average contribution.

medical visits and hospital stays, due to an increase in the relative importance of more complex and costly diseases.<sup>45</sup>

5.91 A summary of the results of a study of the economic impact of aging on the CCSS in Costa Rica is presented below.<sup>46</sup> The long-term financial projections are based on three scenarios for the 1997-2050 period. The 'Base Scenario' uses the system's current parameters and their trends over the last 5-10 years, the 'Pessimistic Scenario' assumes less income and higher costs and the 'Optimistic Scenario' assumes improvements in the simulated key parameters.

5.92 The aging process is an exogenous factor in the study projections and is common to all scenarios. The estimated demographic change is displayed in Table 5.20. The effect of the increasingly rectangular shape of the population pyramid stands out most in the young and elderly groups: young people decrease from 44.7% to 30.2% and the elderly increase from 7% to 18.2% of the total over the 53-year projection. The intermediate age group remains practically unaltered,<sup>47</sup> increasing from 48.4% to 51.6% of the total population. Notice that the age groups where most of the potential direct insured members are found (over 20 years of age) increase as a share of the population from 55.3% to 69.8%, which is why it is expected that the number of insured persons per direct insured member continue to drop throughout the decades.

**Table 5.20. Projected demographic change, 1997-2050**

Age group (years)	Projection period year (Figures in %)					
	1997	2010	2020	2030	2040	2050
0 < 20	44,7	39,1	36,1	33,7	31,6	30,2
20 -60	48,4	52,0	52,1	51,5	52,1	51,6
> 60	7,0	8,8	11,8	14,8	16,2	18,2

Source: Fabio Durán, "El Impacto Económico del Envejecimiento sobre el CCSS en Costa Rica", page 36.

5.93 Table 5.21 shows that the aging process strongly affects the distribution of visits and hospital stays. Keeping the utilization rates per age group constant during the projection period, the demographic change more than doubles the elderly group's share of total visits and almost doubles their share of hospital stays.<sup>48</sup> Consequently, the other age groups' share of all medical services drops sharply—especially the share of the under 15-years-of-age group.

<sup>45</sup> For example, between 1980 and 1999 there is a reduction in the proportion of infectious and parasite diseases, and an increase in other diseases such as tumors and nervous and digestive system diseases, in hospital admissions.

<sup>46</sup> Durán, Fabio. "El impacto económico del envejecimiento sobre el CCSS en Costa Rica". Tesis de Grado, Maestría en Dirección y Gestión de Sistemas de Seguridad Social. Universidad Alcalá de Henares, 1998.

<sup>47</sup> This has an important impact on the CCSS incomes.

<sup>48</sup> This is true, if and only if, there is no change in the service provision guidelines. If there are changes, for example, in clinical administration, hospital stays do not necessarily have to increase to this extent, limiting their impact.

5.94 Table 5.22 presents a summary of the study's financial results. It can be concluded that if the assumptions used in the Pessimistic Scenario approach the actual values in the future, in other words, if utilization patterns remain the same, the CCSS will experience sustainability problems in the mid-term. From 2010 incomes cover only 93% of total expenditures, and the proportion deteriorates throughout the projection period. However, if the Base Scenario proves realistic, the financial balance will remain practically constant during the next five decades, with a financial surplus of between 12% and 18% of total expenditures. The Optimistic Scenario would make a sizeable reduction in insured members' contribution rates possible. Given the results of this study, it is important to analyze the assumptions of the Pessimistic Scenario that lead to a medium-term financial deficit. Only a sensitivity analysis can determine the critical parameters for the CCSS's financial sustainability. These results show the importance of closely following the evolution of the key determinants of financial balance to avoid financial disequilibria in the coming years.

**Table 5.21. Projection of the relative distribution of medical visits and hospital stays.**

<b>Age Group</b>	<b>1997</b>	<b>2025</b>	<b>2050</b>
<b>Medical Visits</b>			
0 < 15	26.8%	18.3%	14.7%
15 - 60	59.2%	57.2%	53.9%
> 60	14.0%	24.5%	31.5%
<b>Hospital Stays</b>			
0 < 15	16.6%	9.5%	6.7%
15 - 60	50.7%	42.5%	35.5%
> 60	32.7%	48.0%	57.8%

SOURCE: Durán, Fabio. "El impacto económico del envejecimiento sobre el CCSS en Costa Rica", page 45.

**Table 5.22. Financial Projections**

Variable	Projection year		(amounts in billions of colones)			
	1997	2010	2020	2030	2040	2050
<b>Pessimistic Scenario</b>						
Incomes totals	150	222	303	408	529	655
Expenditures totales	127	238	348	487	653	842
Incomes/Expenditures (%)	118	93	87	84	81	78
<b>Base Scenario</b>						
Incomes totals	150	256	362	506	676	860
Expenditures totales	127	226	323	441	578	730
Incomes/Expenditures (%)	118	113	112	115	117	118
<b>Optimistic Scenario</b>						
Incomes totals	150	255	360	501	669	850
Expenditures totales	127	214	298	397	508	626
Incomes/Expenditures (%)	118	119	121	126	132	136

SOURCE: Durán, Fabio. "El impacto económico del envejecimiento sobre el Seguro de Salud en Costa Rica", page 49.

### Resource allocation

5.95 A practical alternative for reducing the negative impact on the CCSS's financial condition in the coming years is to contain increases in hospital expenditures by promoting actions such as ambulatory surgical procedures. According to some calculations on the impact of ambulatory surgery, the CCSS would have save approximately 4 billion colones in costs and reduce the number of hospital stays by 78,697.

5.96 *Increasing resource allocation for primary care.* Between 1997 and 2000 the percent of total CCSS spending allocated to primary care increased from 19 percent to over 26 percent. This increase reflects a substitution from specialist and hospital services to PHC. The transition was made by increasing annual expenditures for specialist services at a slightly slower rate than the increases in PHC allocations. The shift is confirmed by the fact that real expenditures on primary care have increased much more than the second and third levels (Table 5.23). In real terms, between 1997 and 2000<sup>49</sup> PHC expenditure increased 82 percent, while the other levels increased 20 percent.

**Table 5.23. Ordinary expenditure in health services by level of care, 1997-2000**

	1997	1998	1999	2000
<b>Relative Distribution (%)</b>				
First Level	19	19	20	26
Second Level	30	31	30	27
Third Level	51	50	50	47
TOTAL	100	100	100	100
<b>Real expenditure index (1997=100)</b>				
First Level	100	110	134	182
Second Level	100	116	126	118
Third Level	100	111	126	120

Source: elaborated based on the CCSS Budget Dept.

<sup>49</sup> The 2000 datum is budgetary provision, not actual expenditure, but historically the budget implementation is high.

5.97 *Inequities persist in the regional distribution of resources.* There has been only limited success in reducing territorial inequity in resource allocation. The CCSS has had limited success in consolidating an information system that would allow systematic monitoring of primary care spending per capita. The inequity reflects pervasive allocation based on the supply of services rather than on the health needs of the population. Data from the year 2001 indicate that the Limon Health Area receives the most resources per capita, 60,154 colones (US\$184) while the Pérez Zeledón Health Area receives the least - 1,202 colones per person (US\$4). There is a pressing need to improve resource allocation, based on the real health needs of the population.

Table 5.24. Territorial Distribution of per capita expenditure by Health Area

Health Area-Lowest per capita expenditure: Pérez Zeledón (in colones)	1,202
Health Area-Highest per capita expenditure: Limon (in colones)	60,154
Average (in colones)	15,791
Standard deviation	10,331
% of Areas-Per capita expenditure over 2 deviations	28.6
% of Areas-Per capita expenditure under 2 deviations	71.4

Source: Moderization Project, CCSS

### Service quality and user satisfaction

5.98 The greatest challenge facing the CCSS is to translate the improvements in efficiency and equity into visible results for the population. Improvements in Costa Rica's health indicators are not necessarily reflected in better perceptions of service quality by citizens. Furthermore, the quality of services is an important topic of public interest (see appendix tables 5.6 and 5.7). While individual facilities have experienced some improvement in perceived user satisfaction, the overall indices have shown only limited improvement.

5.99 *The intra-hospital mortality rate has increased minimally.* Table 5.25 shows that intra-hospital mortality increased by 10 percent in the last decade, from 18.1 at the beginning of the nineties to 20 intra-hospital deaths per 1,000 discharges at the end of the decade, except for pediatric services, where there was a reduction. These indicators, however, must be interpreted cautiously, because a greater intra-hospital mortality rate may imply greater complexity in caseloads rather than a deterioration in quality.

Table 5.25. Hospital Mortality rate, 1990- 1999

Year	Hospital mortality cases per 1000 discharges						
	Total	Medicine	Pediatrics <sup>1</sup>	Gynecoobst.	Surgery	Chronics <sup>2</sup>	Intens.Care
90	18.1	69.4	12.5	0.3	15.5	41.5	756.3
91	18.4	72.3	12.9	0.2	16.3	40.6	756.8
92	18.0	71.9	11.6	0.3	15.1	39.7	800.6
93	18.0	71.9	11.3	0.3	15.7	40.7	809.3
94	18.3	76.5	10.5	0.3	15.7	40.2	713.6
95	19.9	76.4	11.5	0.3	17.9	48.6	804.5
96	19.8	82.2	9.1	0.3	18.0	44.5	809.9
97	19.7	76.1	11.1	0.4	16.9	49.6	843.3
98	20.0	80.6	10.4	0.4	16.4	49.2	818.2
99	19.7	79.5	10.1	0.3	16.9	43.7	775.3

<sup>1</sup> Includes childrens surgery. <sup>2</sup> psychiatry, geriatry, rehabilitation and tuberculosis.

SOURCE: CCSS

5.100 *User Satisfaction is mixed but surveys uncover problems in access and care in the CCSS.* The measurement of user satisfaction is a complex issue that requires care and understanding of the system. Over the last several years, the CCSS has carried out several opinion polls. While the results are mixed,

there is consensus that the CCSS needs to reduce waiting times and improve the quality of services. Results from recent surveys show that:

- One opinion study of users of the CCSS health services performed in 1997,<sup>50</sup> shows average satisfaction (measured on a scale from 0 to 10), of 7.9 for outpatient services, 8.2 for specialty visits and 8.0 for emergency visits (table 5.26).
- The items that score highest are “general cleanliness” and “physician’s manner” for specialty visits and “waiting time for care” of emergency services. The worst rated items are “waiting time for care” and “appointment scheduling”.
- Hospital services received an average score of 8.6 points; the best scores were given to “physician’s manner”, and “general cleanliness” of the facilities, while the lowest scores were for “waiting time for care”, “time dedicated” to the patient by the physician and “personal interest shown”. None of the items evaluated in medical visit services were rated lower than 7, and no item was below 8 for hospital services. The study reports that 14.2% of respondents do not use the CCSS health services at all, and among them, close to 22% mention “bad care” as the reason or mention that they only use private clinics.
- The study reports that 14.2% of the persons do not use the CCSS health services at all, and among them, close to 22% mention “bad attention” as the motivation for not using the services or mention that they only use private clinics.
- Waiting time is perceived as one of the principal quality problems. The EYMSA opinion study (1997) provides evidence of this. With the exception of outpatient visits and emergencies services, all the waiting times for CCSS services are more than double the time that users say they are willing to wait to receive care. Furthermore, the average waiting time for outpatient visits and emergencies reached the limit of the time that users say they are willing to wait (Table 5.27).
- Different surveys show different results. In the annual survey called “Trends in Public Opinions in Costa Rica 1999” (see appendix table 5.5), opinions on service quality are mainly unfavorable: 44% of the people interviewed<sup>51</sup> think that care in clinics and hospitals is very bad, 71% say they have received deteriorated medicine and 62% think that malpractice is on the increase (18% have suffered it). These results are very different from the EYMSA study (1997), which uses a completely different methodology.
- It is interesting to note that user surveys find that more than 50 percent of respondents are in favor of private sector participation in the health sector. In fact, the EYMSA survey shows that in addition to supporting more pluralism in the health market, they are also willing to pay more if necessary in order to improve the CCSS services (Appendix Table 5.6). This probably reflects a consensus that more competition and consumer choice should be a key element of health reforms.

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<sup>50</sup> See EYMSA Estadísticas y Mercadeo. Estudio de Opinión de los Servicios de Salud de la CCSS, 1997. Informe de Consultoría. CCSS, Proyecto de Modernización.

<sup>51</sup> 1000 individuals were interviewed and the margin of error was 3.16 percentage points.

**Table 5.26. CCSS services average satisfaction ratings, 1997**

Service	Average Rating
Outpatient Visit	7.9
Specialist Visit	8.2
Emergency services	8.0
Hospitalization	8.6
Pharmacy	7.9
Laboratory	8.3
X-Rays	8.4
Environment in off. & visit.	8.5
EBAIS Home Service	8.4

Source: EYMSA Estadísticas y Mercadeo, 1997.

**Table 5.27. CCSS waiting time**

Service	Average hours		Current / Willing to wait
	Current	Willing to wait	
Outpatient Visit	2.3	2.4	1.0
Specialist Visit	350.7	64.5	5.4
Emergency services	1.4	1.4	1.0
Hospitalization	69.2	34.4	2.0
Pharmacy	42.6	8.8	4.8
Laboratory	93.6	34.9	2.7
X-Rays	176.5	41.2	4.3

Source: EYMSA Estadísticas y Mercadeo, 1997.

## Efficiency and Decentralization of Pharmaceuticals

5.101 Pharmaceutical expenditures are 12 percent of CCSS health expenditure and are a critical input in producing health services. The Decentralization Law will devolve responsibility and authority to providers and underscores the need to improve efficiency. Recent studies (Cercone et al 2002 and CCSS 2001) have shown significant deficiencies in operating efficiency and in the effectiveness of planning, procurement and distribution processes. The following results highlight the need to improve efficiency in this area:

- Processing time from the start of the procurement process to arrival of the pharmaceuticals in the CCSS averages 217 days. Even in the case of emergency purchases, only 37 percent of drugs procured arrive in less than 8 months. The long delays raise administrative costs and often cause stock-outs. When drugs are unavailable, CCSS hospitals purchase drugs from the private sector at prices that can reach 20 times the CCSS procured price.
- The excessively long procurement process induces higher inventory levels that cost in excess of \$35 million per year. The opportunity cost of holding reserves for more than 200 days is excessive and provokes reallocations in the system that mean that other expenditures are foregone. In addition, excessive stocks increase the possibility of spoilage and theft in the CCSS warehouses.
- The high inventories and lack of direct delivery by suppliers has led CCSS to rent unnecessary warehouse space. If the procurement process were to be reengineered, annual savings would be more than \$9 million.
- User surveys indicate that nearly 50 percent of CCSS users report that the CCSS did not have the pharmaceuticals required in at least one of their visits in the past 6 months. Furthermore, many users report that the CCSS physicians are inducing private sector demand and downplaying the quality of CCSS drugs.

## THE REGULATORY FRAMEWORK

5.102 The regulatory framework has been significantly improved over the past decade. While the law regulating the health sector is outdated and requires revision and structural changes, the MOH has made progress in regulating specific areas in the sector focused on guaranteeing quality and protecting the population from harm. The main areas addressed in the regulations include: (i) authorization and requirements for setting up and operating health, pharmaceutical, and blood bank establishments; (ii) accreditation of health establishments; (iii) supervision and control of private and public health establishments operation; (iv) advertising and information; (v) human resource regulations for supplying services and medications; (vi) drug registration, prescription, importation and quality control; (vii) pharmaceutical advertising and commercialization (viii) rights and obligations of citizens, health professionals and other health personnel; (ix) monitoring and control measures and applicable sanctions; and (x) evaluation of health care quality in public health establishments.

5.103 The MOH authority for supervision and regulation is stipulated in the General Health Law and its respective regulations, as well as in the decree after the Law. The Law outlines key requirements in the following areas: minimum standards for health establishments in terms of personal, physical installations, and equipment; the authorizations necessary from the MOH for developing and operating health services. It also establishes who is subject to the control and monitoring guidelines; who medical service providers are and also which public and semi-public bodies of decentralized management can administer public health services such as the supply of drinking water, sewer systems and collection of solid residues; and establishes key issues related to management of hospitals and health centers. The Law also requires that establishments that use radioactive materials or devices that emit ionizing radiations for diagnosis and therapy must observe specific guidelines, and sets minimum standards for installation and operation of laboratories, blood banks and pharmacies. With regards to enforcement, the Law provides the possibility of intervening and closing down in case of non-compliance with the guidelines, according to the seriousness of the case (risks of infection, non-compliance of requirements, etc.).

5.104 Regulation of the Costa Rican health market is more oriented to regulating operating conditions of health services than to the “administration of the market”, and more to “product regulation” than to “regulation of a final product”. This means that there is minimal emphasis on regulating relations between agents that participate in the health market. More attention is needed to care protocols (final service quality guidelines), patient information guidelines, arbitration mechanisms for patient/physician relationships — both oriented to reducing the information asymmetry and to greater user empowerment, and to fees and establishment accreditation.

5.105 The need to improve regulations related to outcomes and patient rights has increased in recent years with the advent of medical insurance plans and pre-paid medicine. These plans, or this model, is not regulated and exposes the population to significant financial risk. In fact, in 2000 a prepaid health plan entered into bankruptcy and nearly 15,000 people were left without services after having paid their fees.<sup>52</sup> In the case of health insurance, in Costa Rica there is a state monopoly in commercial insurance, centralized under the administration of the National Insurance Institute,<sup>53</sup> and only this state institution has the legal right to sell health insurance. The legal ambiguity under which these plans operate only complicates their regulation. Several Latin American countries where pre-paid medicine has noticeably expanded, like Mexico, Brazil and Argentina, have recently introduced legal reforms in this area.

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<sup>52</sup> The Medicina Prepagada company (MEDIPRE) founded in 1998 worked under this scheme but closed down at the end of December 2000. Close to 95 workers did not receive their severance payments and approximately 9,000 affiliates were affected. The company closed due to financial problems.

<sup>53</sup> The only exception is life insurance, since Sociedad de Seguros de Vida del Magisterio Nacional is in charge of managing life insurance for teachers' guild employees.

5.106 The pharmaceuticals sub-market requires special mention, since pharmaceutical product prices in Costa Rica are very high and bear no relation to prices in the international market. The high prices have been a topic of national debate but the recent reforms in the legislation for medications have not included this topic. Current regulations focus on quality control.<sup>54</sup> There is a vacuum in tariff regulation in the Costa Rican pharmaceutical market.

## THE UNFINISHED AGENDA

5.107 The epidemiological and demographic changes underway, rigidities in the provision of services and pressures on costs caused by the need for more complex care, increasing technology and rising population expectations, among other factors, pose significant challenges for the sector in the coming years. The past reforms have made important progress in improving the use of public funds to achieve better health outcomes, less financial risk and greater user satisfaction. Many of these reforms require further consolidation and others that have remained on the 'drawing board' will have to be reactivated. This section highlights some of the key issues that remain to be addressed at the beginning of the 21st century.

5.108 *Reorganization of the CCSS central administration.* In order to perform successfully its financial and health provision functions, the CCSS must change the organizational structure to allow consolidation and separation of functions. The Financial Division must specialize in its financing role, in the affiliation, collection and contribution control areas. The functions related to planning and service purchasing must be regrouped into one structure, adequately integrated and coordinated. The Medical Division must perform its support function to service providers, and to the support processes unifying them into a single Division.

5.109 *Consolidation of MOH's stewardship and regulatory role and strengthening the regulatory framework for the private sector.* The MOH must do more to develop market regulations, and increase its capacity for evaluation, accreditation and control of public and private health establishments. At the same time, there is a pressing need to develop a legal framework for the regulation of the private sector in health, especially in private insurance and pre-paid medicine. A strategic aspect is to design a regulation and function scheme that would allow, in the future, coexistence of private insurance and solidarity public insurance. MOH's stewardship role includes developing capacity for project monitoring and evaluation using sophisticated techniques such as cost-effectiveness and cost-benefit analysis to measure the ex-ante and ex-post benefits of different social programs.

5.110 *Targeting the poor.* The CCSS provides universal access to all residents in Costa Rica. Despite the declaration of universal access and empirical evidence that the system is highly progressive, there are still significant gaps in access and quality of care. Evidence from the SIPO database shows that the parents of nearly 30 percent of children under 5 in extreme poverty are not covered by social security. Wide variations in per capita expenditure among health areas reflects the difficulty of shifting from a supply based model to a population based model. Efforts have been made by the CCSS to correct these differences but the transition has been slow and informal. The challenge is to establish a clear framework for allocating resources that will improve the allocation of resources as a function of needs and use SIPO and other means to target the most needy groups. There are also significant gaps in the contributory and non-contributory pension schemes.

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<sup>54</sup> There are authors who show how market deregulation has caused an increase in the price of pharmaceutical products in the last four or five years. In Argentina medication costs increased between 2 and 8 dollars and in Brazil and Mexico between 5 and 6. See: Katz, Jorge: *El futuro de los fármacos y de su regulación en América Latina*. En Bezold, Clement; Frenk, Julio; McCarthy, Shaun (1998): *Atención a la Salud en América Latina y el Caribe en el siglo XXI. Perspectivas para lograr Salud para Todos*. Institute for Alternative Futures; Fundación Mexicana para la Salud; Smithkline Beecham Pharmaceutical. México. Page 113.

5.111 ***Develop a client-focused health system.*** The CCSS provider network does not focus on the patient as the center of the system. Additional training, information systems and change management programs are required to shift the emphasis from the bed and the physician to the patient. This change has been successfully carried out in other systems and some CCSS hospitals have made efforts to change. One element of this change is the development of ambulatory solutions that increase home care, extended stay hospices, ambulatory surgery and diagnostic services. These improvements will allow the CCSS to continue to lower average length of stay, improve quality for patients, reduce waiting lists and decrease pre-surgical bed days.

5.112 ***Consolidation of the decentralization process.*** For effective decentralization, development of providers' local capacity is required, especially in the health areas, in fields such as budget management, human resource management and purchasing. The first 34 CCSS centers that were decentralized were not selected by specific criteria but rather by political fiat. Future selection of decentralized entities should be based on specific criteria and an accreditation process should be established to determine which decentralized entities continue under a decentralized scheme and which return to a centralized scheme. There is great confusion among CCSS providers regarding the range of responsibility and authority that has been granted under the decentralization scheme. Technical assistance and patience will be required to develop the scheme so that it improves service quality and efficiency.

5.113 ***Extending Coverage and Consolidating the Primary Care Model under Health Areas.*** By the year 2000, nearly 75 percent of the population was covered under the new primary care model. Most people in rural areas were covered, and the remaining uncovered population is in urban areas where the model has to be modified to meet the specific needs of an urban population. More importantly, those *Areas de Salud* that have been opened will need continuing support to increase their capacity to address the health needs of the population and to develop an integrated care model that strongly promotes prevention and promotion to meet the challenges of chronic diseases and emerging problems like HIV/AIDS, violence and traffic accidents. Special efforts should be made in the areas of the Brunca region where coverage remains low.

5.114 ***Developing provider reimbursement systems that link resources with outcomes and productivity.*** The introduction of the UPH was a step towards linking productivity with payments to hospitals. It has had a positive effect on productivity, but has introduced distortions in the delivery of services as providers seek to maximize payments and minimize complexity. The results show a decline in case mix indices in many tertiary hospitals. The DRG system has been operating in parallel for more than 4 years and presents a unique opportunity to adjust the traditional budget according to case mix, or complexity of discharges and to promote an outcome-based remuneration system. The "Compromiso de Gestión" also requires further development to establish outcome-based indicators that are directly linked to financial resources. Efforts in the past several years have produced only minimal changes in this regard. The purchaser, or the Dirección de Compra, has not taken a strategic role in "coaching" hospitals to produce and obtain the desired outcomes. In fact, recent evaluations of hospital sector performance indicators show some decline in overall performance.

5.115 ***Promote competition in the provider network.*** While some efforts have been made to increase the plurality of the provider network, there is limited experience in promoting competition between public and private and within the public sector. The experiences that do exist are positive resulting in lower prices for the CCSS and substantial improvements in quality. Recent evaluations of the cooperatives show that their productivity is considerably higher as is user satisfaction. User surveys increasingly show that Costa Ricans would like to use the private sector more. There are many areas where greater public-private partnerships could be developed to enhance cooperation and competition. The relationship with private providers is essentially unregulated. Although there is a CCSS regulation on this issue, the MOH and the CCSS have lax enforcement and limited accreditation processes. In order to create a favorable setting for

increasing efficiency, the MOH and the CCSS must develop regulations and a framework for public-private partnerships by promoting accreditation-linked incentives, mandatory public and private provider accreditation, billing among providers, greater public information on relative performance and quality, and encouraging user choice among providers.

**5.116 *Reengineering the pharmaceuticals supply chain.*** Purchase and distribution of pharmaceuticals remains a major bottleneck in the delivery of services. As many as 40 percent of CCSS users have experienced stockouts of prescribed medications and many CCSS users feel that quality is inadequate. The process of procuring pharmaceuticals takes more than a year on average, producing large inventories that contribute to unnecessary expenditures. These expenditures are estimated at nearly US\$30 million per year and reengineering would offer the CCSS important opportunities to reduce costs and improve efficiency. These changes will require improvement in information systems and better supply chain management.

**5.117 *Improving revenues and resource management.*** The Worker Protection Law provides for the legal instruments necessary for contribution control and authorizes the CCSS to extend mandatory coverage to independent workers. The law offers several challenges for the CCSS: to improve the contribution collection systems, to improve the administrative processes of contribution control and to begin the mandatory expansion of social security to self-employed workers. The law also provides the CCSS with improved instruments to reduce evasion but their use will require aggressive tactics by the CCSS and better information systems.

**5.118** The aforementioned areas do not cover all of the immense challenges facing policymakers in the health sector but rather emphasize some of the key areas that would lead to better outcomes and further improvements in value for money. The success achieved in the past is by no means an indicator of success in the future, as the emerging problems of the 21<sup>st</sup> century pose a significant challenge to the Costa Rican health system in terms of costs, user satisfaction and quality of care. Strong leadership and a concerted effort will be required to address the unfinished agenda and to promote a healthy and productive society.



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# **Social Proteccion**

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## SOCIAL PROTECTION

### PENSIONS

6.1 There has been significant reform of pensions in Costa Rica in the past decade. The approval of the Law for the Protection of the Worker (Ley de Protección al Trabajador) was an important step towards establishing a capitalization based pension system, as a second pillar (the first being the public system), under the supervision of the recently created Pension Superintendence. Reforms between 1992 and 1995 reduced the number of special pension schemes and achieved a more unified benefit framework. The reforms also reduced the future burden on public expenditure and the state subsidy necessary to cover pension expenditures.

6.2 By the end of the 90's, an estimated 56 percent of the economically active population (EAP) was covered by the National Pension System, a decline in coverage from 66 percent of the EAP at the start of the decade. However, coverage of informal sector workers has increased to 27 percent. The aging of the population represents a significant challenge in public policy over the coming years. The CCSS public pension pillar currently covers only 36 percent of the population aged over 60 years, and an additional 35 percent are covered under the non-contributory scheme (RNC). The introduction of complementary schemes should increase these percentages over the coming years, and expanding access to RNC will improve overall coverage of the pension system.

6.3 In the case of the Disability, Old Age and Death (IVM) plan, the general protection plan of most Costa Rican workers, the *contributors/pensioned persons index* — the ratio of contributors to pensioned persons, an indicator that measures the demographic burden of the pensions system — decreased from 16.6 contributors per pensioned person in 1980 to 6.9 in 1998. At the same time, *the reserve quotient*, which measures the number of years of expenditures the scheme's reserves could cover fell considerably during the same period. These figures indicate the critical economic position facing the scheme. The future will be even more difficult for two reasons: in the next fifty years the proportion of elderly persons over 65 will more than double, so the working age group will have to support a growing proportion of elderly. Moreover, it is projected that under current financing conditions, the contribution rate of 7.5 percent will become insufficient by the year 2015 and the IVM Plan reserves will be completely exhausted in less than three decades. Another great challenge for the Costa Rican pensions system is to try to increase coverage since it is estimated that the system as a whole covers a little over 55 percent of the work force, and only 35 percent of the population 65 years old and older receive a contributory pension.

6.4 The agenda for future pensions reform must include management improvements in order to guarantee the sustainability of the pensions system. However, given the complexity of the system, the solution to the main problems will need a dose of technical creativity as well as a strategic policy capable of integrating the participation of different actors and of balancing the interests of diverse sectors of Costa Rican society. The protection of individuals, both employed and unemployed, is a guarantee that must be enjoyed equally by all. The poverty and employment conditions that prevent many from receiving a pension benefit also need to be addressed, underscoring the need for further social public policy expenditure analysis.

6.5 This chapter analyzes the National Pensions System (SNP), with emphasis on its evolution over the 90's. It describes its structure, the principal reforms that occurred during the decade, and the current policies and priorities. It analyzes the performance of the system in terms of financial sustainability, affiliation, coverage and collection, and equity and investment management. The chapter ends with a summary of the achievements and pending agenda.

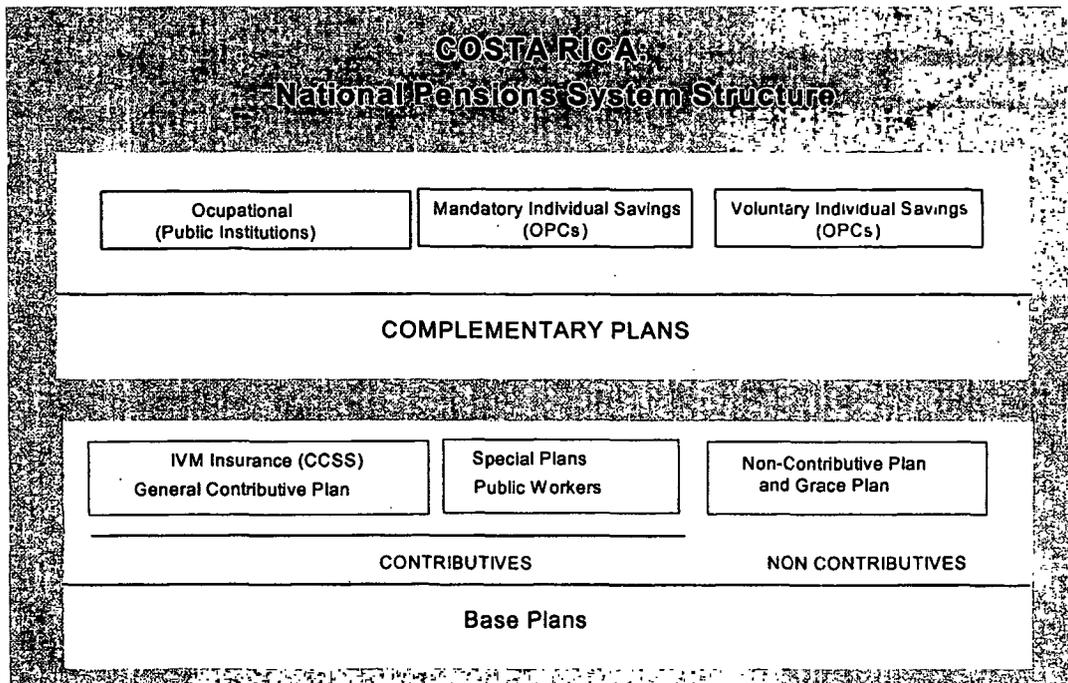
## General description of the National Pensions System

### *Plan types and coverage*

6.6 The SNP includes two main components: the base plans and complementary plans. The main function of the base plans is basic assurance of active insured members' income against the risks of old age, disability and death. The complementary plans offer complementary protection for insured members who wish to assure a greater proportion of their income. The base plans comprise four contributory and mandatory programs and two non-contributory programs:

- The Disability, Old Age and Death Insurance (IVM) scheme administrated by the Caja Costarricense de Seguro Social (CCSS);
- The National Teachers' Association Pensions and Retirement System (SPJMN), a complementary scheme to the IVM for the country's teachers consisting of two components: a Distribution Program and a Capitalization Program;
- The Special Schemes covered by the National Budget, which include six plans and one mixed plan for several groups of the public sector;
- The Judicial Branch Pensions Plan, a mandatory plan for all Judicial Branch officers;
- The Non-Contributory Pension (RNC), that provides benefits to the indigent population and is administered by the CCSS; and
- The Special Plans covered by the National Budget, composed of five plans mostly to cover ex-officers of the public sector

6.7 The complementary plans are of three types: (i) mandatory occupational programs for employees of six public institutions, (ii) a private voluntary retirement saving plan, and (iii) a mandatory private plan for the self-employed labor force.



**Table 6.1 Costa Rica: Contributions, requirements and benefits  
In the main contributory base plans**

Plan	Contributions			Requirements (old age)		Benefits (old age)	
	Active Insured	Pensioned Employer	State	General	Minimum	Reference Income	Replacement Rate
<b>IVM</b>							
Dependent (mandatory)	2,5%	4,75%	0,25%	65/0-240	Male.:61/11-462 Female.: 59/11-466	48/60	60%/240 + 1.002%/12
Independent <sup>1</sup> (vol.)	7,25% -5.50%	--	0,25% -2%				
<b>National Teachers Ass.</b>							
<i>Distribution Plan</i>	10% (0-137,700) 12% (> than 275,400) 14% (> than 413,100) 16% (> than 541,587)		0,25%	360 quotas In 2004: 400 quotas		48/60	80%
<i>Capitalization Fund</i>	8%	8%	0.25%	65/0-180	55/0-396	All (real)	60%/240 + 1.2%/12
<b>Judicial Bran.</b>	9%	9%	0.25%	62/0 - 0		24/all	100%/360

<sup>1/</sup> Values in parentheses are valid for income levels below 60,000 colones.

Note: "Contributions" refers to the percentage applied to salaries, pensions or other eligible income.

"Requirements" are the number of contributions that must have been paid at each retirement age, to be eligible for benefits. The reference income is calculated as a simple average of the highest salary received in the appropriate period. Replacement rate is the percentage of salary that is received as a pension, given the corresponding number of contributions.

6.8 The complementary trade union programs protect workers of the CCSS, Banco Nacional de Costa Rica, Banco Crédito Agrícola de Cartago, Banco de Costa Rica, Instituto Costarricense de Electricidad and Refinadora Costarricense de Petróleo. Private individual retirement savings plans emerged in Costa Rica at the end of the eighties, as voluntary plans. By 1997 there were nine companies administering voluntary defined-contribution pensions plans, with membership equivalent to 12 percent of the total membership of the public pension plans. The SNP basic programs have maintained a constant coverage of about 56 percent of the economically active population (EAP) during the last decade. Its composition, however, has greatly changed: coverage of employees has fallen to 59 percent, and coverage among self-employed workers increased to 27 percent in 1999.

6.9 The financing for contributory base programs comes from salary contributions, the government contribution and direct government subsidies. The non-contributory base programs are financed from payroll taxes and general taxes. The financing of the trade union complementary plans is solely based on salary contributions.<sup>55</sup> Finally, private retirement saving is financed with by workers' voluntary contributions, that in some cases are complemented by employer contributions.<sup>56</sup>

<sup>55</sup> In 1995 it included 26% of public servants and 3.8% of the EAP.

<sup>56</sup> In 1997 it included 90,000 active contributors, representing 7% of the EAP.

6.10 Mainly due to the low maturity level of the IVM Insurance, the beneficiary coverage of the contributory programs is lower than the contributory coverage, reaching approximately 36 percent of the population over 60 years old. Additionally, according to CCSS data, close to 35 percent of the population over 65 years old receive a RNC non-contributory pension; the Special Non-Contributory Plans cover another nearly two percent.

6.11 The base programs offer periodic monetary allowances, including an annual thirteenth month against disability, old age and death, aside from the coverage of its CCSS beneficiaries by the CCSS, for which each Plan establishes a contribution rate in accordance with the corresponding pensions expenditure.<sup>57</sup>

### ***Program Characteristics***<sup>58</sup>

6.12 ***IVM Insurance.*** The CCSS contributory insurance is the largest pensions program in Costa Rica both in terms of the number of insured members as well annual revenues. This plan is mandatory for employees and voluntary for self-employed workers. Its contributory coverage represents 51.8 percent of the EAP (761,000 active insured members), composed of 68 percent coverage in the public sector and 49 percent in the private sector.

6.13 The IVM began operating at the end of the 1940's as a benefits program with a complete capitalization financing scheme. Currently, however, its reserve quotient is only 2.7 years. The contribution revenues (69% of total incomes and 109% of total expenditures) are composed of tripartite contributions for employees and bipartite contributions for self-employed workers, with differentiated rates for self-employed workers (with a cut-off point of monthly income of under 60,000 colones). Its total incomes are equivalent to 2.6% of the GDP. The IVM benefits have the least generous profile of all the SNP (see table 6.1) and its total expenditures represent 1.6% of the GDP.

6.14 ***National Teachers' Association.*** The SPJMN is an optional plan to complement the IVM for all teachers in the country's public and private educational entities. The scheme includes a Distribution Plan that closed down in 1992 and a Capitalization Plan that was initiated in the same year.

6.15 The population covered by the Distribution Plan includes all education workers appointed before July 15, 1992 and born before July 13, 1965 as well as all teachers who decided voluntarily to stay in the Plan. Workers first appointed after June 14, 1992 or born after August 1, 1965 are covered under the Capitalization Plan. Administrative officers named after July 13, 1995 must sign up with the CCSS IVM insurance. There are no data on the number of active insured members, but the Distribution Plan has approximately 25,600 pensioned persons, and expenditure equivalent to 1.3% of the GDP.

6.16 The financing of the *Distribution Plan* is composed of a basic progressive quota for workers and pensioned persons (see Table 6.1). Additionally there is a special progressive quota for the highest pensions that ranges from 25% to 75%. The plan also receives a government quota equivalent to 0.25% of salaries, and until December 1999, also received a "solidarity contribution" from contributors to the Capitalization Plan of 2.25% of their salaries. The total income of the Distribution Plan covers 39% of its total expenditure and its deficit is met by a State subsidy equivalent to 0.8% of the GDP.

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<sup>57</sup> Some non-contributory Special Plans are honorary and not protective, such as for example the Beneméritos de la Patria, Expresidentes de la República and Premios Magón plans.

<sup>58</sup> Unless specified otherwise, the data refer to current conditions and the figures to 1999.

6.17 Benefits were reduced by Law 7531 of July 1995: in order to receive an old age pension, people must make a minimum of 360 monthly payments, and this is being gradually increased to 400 quotas by the year 2004, which implies an increase in the average retirement age. It establishes a simple average of the best 48 monthly salaries out of the last 60 as the reference salary, and reduces the payment level from 100% to 80%.

6.18 In relation to the *Capitalization Plan*, the Law 7531 of July 1995 established an additional solidarity contribution (which is transferred to the distribution plan) of 2.75 percent (setting the quota at 8%) for ten years, for workers and employers. The Pensions Board may vary the workers' contribution and may also determine the amount of the allowances. Currently this plan is not sustainable in the long term; its contribution rate must be increased two or three percentage points in order to finance the promised benefits profile [Rodríguez and Durán, 1998, page 232].

6.19 The *Capitalization Plan* is financed by tripartite contributions (employer, teacher, State) that total 16.25 percent of salaries. In order to receive retirement benefits, workers must be at least 55 years old and have made a minimum of 396 contributions. For older workers up to age 65, the requirement gradually falls to 180 contributions. The reference salary is calculated as the average salary over the entire contribution period, in real terms utilizing the metropolitan area CPI.

6.20 The benefit rate is 60 percent for the first 240 monthly contributions plus 0.1 percentage point for each additional monthly contribution. Additionally, 1.5 percent is added for each trimester (three months) that retirement is delayed after having met the minimum required contributions, up to a maximum of 16 trimesters. If the minimum contributions requirement is fulfilled after 63 years and 7 months of age, the pension will be no less than 60% of the reference salary.

6.21 ***Special Contributory Plans.*** These plans were the result of strong pressure by diverse groups of public workers who wanted a more generous program than the CCSS IVM. There are six contributory plans and one mixed plan: the Finance Ministry plan (8,064 members in December 1999); Public Works and Transportation (3,994 pensioned persons); Telecommunications and Electricity (1,810 pensioned persons); Public Registry (367 persons); Railroads (289 pensioned persons) and War (approximately 260). Additionally, musicians and military band members must contribute to the War Plan, making a total of 346 (contributory and non-contributory) pensioned persons.

6.22 The Finance Ministry plan is the most generous of all and in 1985 the plan was made available to all the public workers. Many groups of public workers gradually incorporated into it making it the biggest of the contributory Special Plans. In 1992, the Pensions Law closed down the special plans. As of July 15 of that year all new workers that enter the public administration must affiliate to the IVM. Also, the administration of Special Plans was centralized in the National Pensions Administration of the Labor and Social Security Ministry. In 1993, the law that opened the Finance Ministry Plan to all public workers was declared unconstitutional, making benefits available only to workers who had complied with the requirements before June 1993.

6.23 The Special Contributory Plans currently cover nearly 15,000 pensioned persons. The benefits are characterized by an early retirement age (close to 60 years of age), the absence of a contribution requirement, a reference salary calculated as the average of the 12 best salaries of the last 24 and a very high replacement rate (for some plans it is 100%).<sup>59</sup> Expenditure by these special contributory plans is equivalent to 0.64% of GDP. Their incomes finance only 10.8% of expenditure, so they requires a large government subsidy (0.57% of GDP) in order to comply with their financial obligations.

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<sup>59</sup> The short reference period increases the pension amount in an inflationary context.

**Table 6.2. Coverage and expenditure of the main base plans, 1999**

Plan	Coverage	Expenditure	
	Insured/Pensioned	As %GDP	As % of income
IVM (CCSS)	761.000 (51,8% of PEA)/??	1,6	92
National Teachers Association??/25.600		1,3	255
Distribution Plan			
Special Contributive Plans	??/ 15.000	0,64	925
Judicial Branch	8000 (year 1996)/ ??	0,12	??
RNC (CCSS)	??/ 97.000	0,3	non-contributive
Special Non-Contributive Plans	??/ 5.500	0,06	non-contributive

NOTE: ?? means there is no information.

**6.24 Judicial Branch.** The Judicial Branch Pensions System is the smallest plan both in the number of pensioned persons and expenditures. In 1996 this plan had over 8,000 active insured members and almost 1,500 pensioned persons. Its expenditure that year represented 0.12% of GDP. This system covers workers of the Judicial Branch and included the Congressmen's Pension Plan until it was abolished by Law 7605 in 1996. That year the contribution was raised to 9% for workers and employers, for salaries and pensions. The government contribution was set at 0.25%. At the same time the retirement age was increased from 60 to 62 years. The reference salary went from a simple average of the best 12 monthly salaries, irrespective of the source of income, to the best 24 monthly salaries within the Judicial Branch. The replacement rate stayed at 100%, except for people who had worked less than thirty years, for whom it was 80%, multiplied by the number of years served in the Judicial Branch divided by thirty.

**6.25 The Non-Contributory Pension (RNC)** is administered by the CCSS. Its function is to help people whose monthly family per capita income is 50% or less than the sum of the IVM minimum old age pensions, and who fall into one of the following categories (in order of priority): persons over 65 years old, persons with physical or mental handicaps, abandoned widows, underage orphans and others. The benefits include a pension of approximately 12,000 colones per month (roughly \$34 at the time of this report) for thirteen months a year, and CCSS insurance, as pensioned persons. The basic pension increases by 10 percent for each dependent up to a maximum of three. This non-contributory plan had more than 97,000 pensioned persons in June 1999 and its total expenditure, including the CCSS payment and administrative expenditure, represented 0.3 percent of GDP. Its financing is limited to 20 percent of the income of the Social Development and Family Allocations Fund (financed by a payroll tax of 5% and 20% of the Sales Tax).

**6.26 Non-Contributory Special Plans.** Since 1992 these plans have been run by the National Pensions Administration. There are five plans: Non-Contributory War, with approximately 3,270 pensioned persons in December 1999; the Grace Plan with 2,188 pensioned persons; Ex-Presidents, with 13 pensioned persons; National Heroes, with 5 and the Magón National Prizes, with 3. Together, these Plans currently provide benefits to nearly 5,500 people. The average pension is about one-quarter of the average pension of the contributory Special Plans. Total expenditure represents around 0.06% of GDP, which is totally financed by the National Budget.

## Structure of public expenditure of pensions

6.27 All pension plans, both contributory and non-contributory, suffered a considerable real increase in expenditure during the decade (Table 6.3). The expenditure volatility in real terms of the Special Plans, mainly the non-contributory plans, is a cause of concern. Total expenditures had a double-digit increase in 1993 and in 1996.<sup>60</sup> The extraordinary increase in 1993 is due to the electoral cycle effect, in which inflation is artificially reduced in pre-election years, causing real values to be overestimated.

6.28 The structure of expenditures shows that the base contributory plans represent over 90% of total pension expenditures excluding the Judicial Branch Plan (see Table 6.4). The IVM is the largest plan with 42% of total expenditures, followed by the National Teachers' Association Distribution Plan with 33%. The Special Contributory Plans represent around 17% and the Non-Contributory plans account for the remaining 7-8%. In relation to GDP, total expenditure has remained constant at between 3% and 4% during the last five years.

Table 6.3. Evolution of pensions expenditure (base plans), 1990-1999

Year	Total		Contributory Plans						Non-Contributory Plans					
	real	% incr.	Subtotal	IVM		Rep. Fund <sup>2</sup>		Special Plan		Subtotal	RNC		Special Plan	
			real	% incr.	real	% incr.	real	% incr.	real	% incr.	real	% crcm.	real	% crcm.
1990	26.4		22.6	22.6						3.8	3.8			
1991	26.2	-0.6	23.2	23.2	2.6				3.0	3.0	-19.8			
1992	26.4	0.6	23.9	23.9	3.1				2.5	2.5	-18.5			
1993	30.9	17.3	26.8	26.8	12.2				4.1	4.1	67.5			
1994	64.4		58.3	27.6	2.9	19.9		10.8	6.1	5.2	25.9	0.9		
1995	68.6	6.6	62.8	28.4	2.9	22.0	10.2	12.5	5.8	5.0	-3.8	0.8	-5.5	
1996	77.3	12.6	70.7	32.3	14.0	24.6	11.8	13.8	6.6	5.6	12.3	1.0	16.4	
1997	82.1	6.2	75.3	33.5	3.5	27.2	10.7	14.6	6.8	6.1	8.5	0.7	-24.2	
1998	88.3	7.6	80.3	36.4	8.6	29.3	7.8	14.6	8.1	6.8	11.3	1.3	78.6	
1999	95.1	7.7	87.3	39.8	9.4	31.7	8.2	15.8	7.8	6.4	-5.6	1.4	10.3	

NOTE: in billions of January 1995 colones, using the general IPC annual average.

<sup>2</sup> The National Teachers Association Distribution Plan

SOURCE: CCSS, Ministry of Finance (DGPN), BCCR and own calculations.

## The National Pension System Reforms

6.29 The SNP remains fragmented and lacks an integrated strategy. Beginning in 1995 there has been progress in the design of a strategy for solving three crucial system problems: long-term non-sustainability, low coverage of self-employed workers and the existence of privileged groups. Despite these efforts and the introduction of a mandatory second pillar, further consolidation and structural changes are critical to the long-term sustainability of the pension system.

### Reforms in the 90's

6.30 The pension system reforms carried out in the 90's were oriented toward achieving four main objectives: (i) consolidating the base contributory plans into three articulated programs with a uniform

<sup>60</sup> Because there is no information on the Distribution Plan and the Special Plans before 1994, the total expenditure figures are not comparable before and after 1994.

relationship between insured members' obligations and rights; (ii) guaranteeing the long-term sustainability of these programs and balancing solidarity and individual interest; (iii) complementing the base contributory plans with a retirement savings programs; and (iv) increasing efficiency in program management.

**Table 6.4. Pensions expenditure structure (base plans), 1990-1999**

Year	Contributory										Non-Contributory			
	GPP		Subtotal %GPP	IVM		Rep. Fund		Special Plan		Subtotal % GPP	RNC nominal %GPP	Special Plan		
	nominal	%GPP		nominal	%GPP	nominal	%GPP	nominal	%GPP			nominal	%GPP	
1990	11.8	1.7	85.7	10.1	85.7					14.3	1.7			
1991	15.1	1.7	88.5	13.3	88.5					11.5	1.7			
1992	18.4	1.6	90.7	16.7	90.7					9.3	1.7			
1993	23.8	1.8	86.7	20.6	86.7					13.3	3.2			
1994	56.2	3.4	90.6	24.0	42.8	17.4	30.9	9.4	16.8	9.4	4.5	8.1	0.8	1.4
1995	73.7	3.5	91.5	30.5	41.3	23.6	32.0	13.4	18.2	8.5	5.4	7.3	0.9	1.2
1996	97.6	4.0	91.5	40.8	41.8	31.0	31.8	17.4	17.9	8.5	7.1	7.3	1.2	1.3
1997	117.4	4.0	91.7	47.9	40.8	38.9	33.1	20.9	17.8	8.3	8.7	7.4	1.0	0.9
1998	141.0	3.9	90.9	58.1	41.2	46.8	33.2	23.3	16.5	9.1	10.8	7.7	2.1	1.5
1999	167.1	3.8	91.8	69.9	41.8	55.7	33.3	27.8	16.6	8.2	11.2	6.7	2.5	1.5

NOTE: in billions of colones

GPP = Public Pensions Expenditure in base plans except the Judicial Branch's Plan.

SOURCE: CCSS, Ministry of Finance (DGP/N), BCCR and own calculations.

6.31 The unification of the base plans means that the contributions and years of service a worker has had in a program are acknowledged in other programs if a worker changes plan membership as a result of a change in job or labor status. This increases flexibility in the labor market and reduces the tendency for labor market turnover to undermine social security.

6.32 The relationship between insured members' obligations and rights means that higher program benefits must be matched by higher contributions. Technically, this means that the relationship between the actuarial value of the benefits and the actuarial value of the contributions must be uniform in across all plans, and that this relationship must be such that it guarantees the long-term sustainability of the programs and balances solidarity and individual interest. A serious barrier to unifying the plans and achieving a uniform relationship between insured members' obligations and rights is posed by the rights acquired by the population already pensioned and the population retiring soon, which implies that this process must be gradual and therefore, the effects of these measures will not be fully realized until after several generations, when the transition process has finished.

6.33 In Costa Rica there is enough consensus that the reform must lead to a new pension system with three components: the first component would comprise four base plans, three contributory and one non-contributory (RNC); the second component would be formed by a complementary retirement savings program (this component would encompass the six mandatory occupational programs currently in public institutions). These two components would be mandatory and collectively would offer general protection. A third component composed of the voluntary retirement savings programs would improve the combined pension of the first two components for people who want additional protection.

### ***Reforming the IVM Scheme***

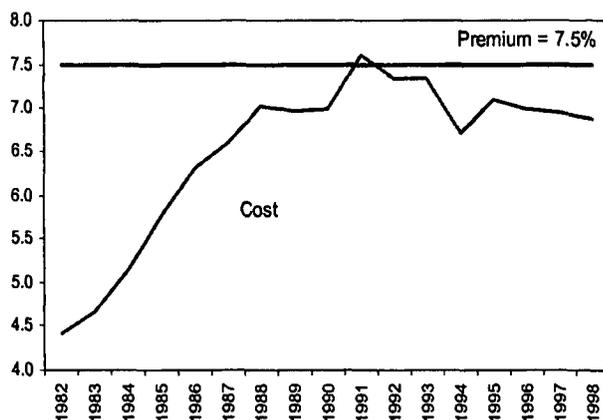
6.34 During the nineties there were several reforms of the IVM Plan, most directed toward reducing the escalating costs and extending financial equilibrium for a longer period. But none of these reforms was enough to guarantee the scheme's long term financial stability. The main challenge facing a more far-

reaching reform is that it would require political support from the sectors involved. In order to understand the IVM Plan's current situation, it is necessary to review the objectives and scope of the reforms carried out in previous years.

### *The 1991 Reform*

6.35 In 1991, the CCSS Board of Directors approved a statutory reform whose main objective was to avoid an operational deficit. The actuarial studies carried out by the CCSS pointed out that in the short term the IVM Plan would not generate enough income to cover its annual expenditures.

**Figure 6.1**  
IVM Insurance: Cost Evolution  
(as salary percentage)



Source: CCSS and author's calculations.

6.36 Between 1982 and 1990 the total Insurance cost, defined as the contributions expenditure/salary quotient, had gone from 4.4% to 7%. With a contribution rate set at 7.5% of salaries and incomes, the actuarial evaluations in 1990 pointed out that in a very short period costs would exceed this rate, and that urgent measures had to be taken in order to avoid this situation. As with any pensions system, there were only two options: to raise the contribution rate in order to increase income, or, to curb costs by modifying benefits and requirements. Figure 6.1 charts the trends in costs during this period.

6.37 The 1991 reform included three basic measures. First, the minimum retirement age increased from 57 to 62 years for men and from 55 to 60 years for women. This is still

well below the original minimum retirement age of 65 years for both genders when this Plan was first established. Second, contribution requirements were increased; so for example, insured men who retired at 62 years of age had to have a minimum of 38 years of contributions, or 20 years of contributions if retiring at 65 years or older. The possibility of retiring earlier remains the same but with a larger number of contributions required. Third, the pension amounts were modified. As the previous Figure shows, despite the measures taken, in 1991 costs surpassed the established premium of 7.5%, and was not until the following years that the reform started to had an effect and maintain costs below the set premium.

### *The 1995 Reform*

6.38 This reform basically modified the widows' and disability pensions and left the benefits scheme unaltered. The current regulations were established, under which a widow or widower over 60 years old receives a benefit of 70%; 60% if he or she is over 50 years old, and 50% if under 50 years old. With respect to the disability pension, it establishes a minimum requirement scale that varies from requiring at least one year of contributions if the member is 24 or younger, up to 10 years of contributions for persons 48 or older. Additionally, it establishes that the member must have made at least 12 contributions during the two years prior to the declaration of disability if he or she is under 48 years old, or at least 24 monthly contributions during the prior four years if over 48 years old. One of the objectives of this reform was to establish incentives for continuity as active contributors, that is, to increase contribution density, in order to minimize periods of inactivity and of opportunism.

### *Other reforms of the National Pensions System*<sup>61</sup>

6.39 In November 1991, Law 7268 modified RPJMN benefits and requirements, because they were considered overly generous and too different from those required for the IVM Plan. The contribution rate increased from 5 percent to 7 percent, and the benefit was set at 100 percent of the average of the twelve highest monthly earnings during the last twenty-four months, instead of at the highest salary in the last five years. This reform was also justified by the financial and actuarial crisis the Plan was facing, but it did not have the expected effects.

6.40 Law 7302 of July 1992, known as the "Framework Law", established that all new workers beginning work at the Teachers' Association, including private sector teachers, had to join the new collective capitalization programs. Two Teachers' Association financing plans were created: one for paying members who had enrolled before the reform, which closed down, and the other a collective capitalization Plan for the new members.

6.41 Among other changes, the Framework Law unified and closed down most of the special pension plans. Unfortunately, these changes were not enough to contain the increasing expenditures. All workers who joined the public administration after July 15, 1992 had to apply for the IVM Plan, with the exception of Teachers and Judicial Branch workers. Congress took advantage of this law to create a Congressman's Plan, which gave them the right to retire under the Ministry of Finance Plan, the country's most generous. This law did not introduce significant changes in benefits and requirements, hampered by the political difficulties such changes involve.

6.42 In the midst of a difficult fiscal situation, in August 1995, Law 7529 was approved, known as the Normalization and Pensions System Sustainability Law under National Budget. The law rations benefits with respect to replacement, reference salary, age and number of contributions requirements. This law was vetoed by the Executive Branch and has, therefore, not become operative.<sup>62</sup>

6.43 In July 1995, Congress approved Law 7531, the National Teachers' Association Pensions and Retirement Integral System Reform Law, the most important reform of this plan since its creation. The reform increased the teacher population covered by the Capitalization Plan: in addition to existing members, it included teachers who were 30 years old or younger on July 13, 1995, and other Teachers' Association workers who voluntarily decided to move to the IVM Plan. Its primary objective was to reduce the long term actuarial deficit of the Distribution Plan, by moving people to the Capitalization Plan and to the CCSS Plan. It also sought uniformity with the IVM Plan with respect to requirements, benefits and retirement conditions. Even though the reform increased government expenditure and reduced the Distribution Plan's income in the short and medium term, this would be offset in the longer term through lower future expenditures. In the long term, the reform produces large fiscal savings.<sup>63</sup>

6.44 In June 1995 Law 7523 was approved, called the Complementary Private Pensions and Reforms to the Market Values Regulator and Commerce Code Law. The objective of this law was to introduce some regulation of the complementary private pension plans. This law tried to regulate the conditions for accessing retirement savings, setting a minimum waiting period of five years; second, it introduced three

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<sup>61</sup> A detailed exposition of these reforms and their effects may be found in: Durán, Fabio y Adolfo Rodríguez. *Reforma de Pensiones: los desafíos de la vejez*. Programa Integral de Reforma de Pensiones, 1998.

<sup>62</sup> During the parliamentary discussions, certain changes were made in the reform text, that increased the fiscal costs instead of reducing them, for this reason it was vetoed by the Executive Branch, and is still not in operation.

<sup>63</sup> Details of the estimated savings resulting from this reform are found in: Programa de Reforma Integral de Pensiones, Gobierno de la República de Costa Rica. *Reforma de Pensiones del Magisterio Nacional*, 1998.

types of fiscal incentive: savers may deduct their contributions of up to 10 percent of income from their taxable income; employers' complementary contributions may be deducted as expenses and no social obligation has to be paid on these contributions, however, the pensions paid by the private plans are subject to income tax.

6.45 Another reform occurred in June 1996, with the approval of Law 7605. This law abolishes the Congressmen's special pension plan and introduces modifications to Law 7333 that regulates the Judicial Retirement and Pensions Plan. This reform varied the reference salary, while keeping the pension amount at 100% of the salary. Furthermore, it increased the worker's contribution from 7 percent to 9 percent of earnings and left it to the Judicial Branch to increase it up to a maximum 15 percent; in addition, it granted power to freely set the employer contribution and reduce the government contribution from 7 percent to 0.25 percent of salaries. Finally, it raised the minimum retirement age to 62.

6.46 The nineties were characterized by many partial reform initiatives, most of them directed toward reducing benefits and costs, and providing better financial conditions for the different SNP components. Although the reforms succeeded in meeting some of their objectives, a set of problems persist, related to harmonizing the system as a whole.

### ***The Worker Protection Law***

6.47 A new component was introduced into the pensions system in January 2000 with the approval of the Worker Protection Law. The new pensions plan is one of complementary individual capitalization. This program is mandatory for all employees and voluntary for self-employed workers. It is financed through a total contribution of 4.25% of all earnings, with collection centralized by the CCSS. Membership began in the year 2000, but operations start in the year 2001.

6.48 It is estimated that the monthly contribution of 4.25% of incomes established by this Law, will be enough to finance a benefit equivalent to 17.5% of the last salary.<sup>64</sup> The restriction imposed on the reform of not increasing the current contribution rate was not respected, payroll contributions before the 2000 reform were only 2.75 percentage points, the contribution was set at 1.5 points higher. However, the law foresees a reduction in the INS premium contributed to cover professional risks, as a way to avoid an overall increase in the total social contribution rate.

6.49 The new private plans cover only retirement allowances, while coverage for disability and death risks continues under the base plans administered by the CCSS. The plan is administered exclusively by pension funds administration corporations in Costa Rica called "Complementary Pensions Operators (OPC), and supervised by SUPEN, an entity created in 1995 for the supervision of all the pension plans."<sup>65</sup>

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<sup>64</sup> The estimate is based on the real annual net rate of return of 4%, a contribution density of 80%, average admission age of 21 years and retirement age of 65 years, and a real salary growth of 1% per year. For example, if the feasibility increases to 5%, the replacement rate grows to 25%, approximately.

<sup>65</sup> This includes base and complementary plans, private and public, mandatory and voluntary.

**Table 6.5. SNP estimated contribution coverage, 1990-1999**

Year	PEA	Employees			Self-Employed
		total	private	public	
1990	56	74	66	100	3
1991	53	70	62	100	4
1992	56	73	66	100	4
1993	56	73	66	100	4
1994	56	73	66	100	5
1995	55	71	64	100	5
1996	56	72	65	100	8
1997	55	71	64	100	13
1998	56	69	61	100	21
1999	56	66	59	100	27

<sup>1</sup> Assumes public sector coverage is 100%.

NOTE: Values in % Does not include "non-remunerated" PEA nor the "is looking for job for the first time".

SOURCE: CCSS and own calculations.

6.50 The Government offers insured members a guarantee of their total contributions to the scheme, but not of the interest generated. The Law also foresees the free choice of the OPC by the member and transfer of members among OPCs, or among the funds they administer, without any cost. The limits on funds investment are established by the SUPEN. However, the law establishes that at least 15% of the resources administered by the operators must be invested in mortgage securities issued by the National Housing Financing System, as long as they at least offer earnings equal to the average of other investments made by the operators.

### **The Performance of the National Pensions System**

6.51 Because most of the effects of the SNP reforms are not likely to be realized for many years, the current projections for the different pension plans estimate the long term effects of the changes introduced by the reforms. Other SNP aspects may be studied more generally. Membership obligations, program management, and the redistribution effect of the pensions system through RNC are examples. These and other issues are analyzed in this section in terms of efficiency, equity and short and long-term sustainability. The study focuses on the base plans because of their disproportionate weight in the current Costa Rican pensions system.

#### ***Coverage and benefits***

6.52 ***Coverage is low and currently stagnant.*** One of the system's main deficiencies is its low coverage.<sup>66</sup> There are huge coverage differences between employees (around 75% of the EAP) and self-employed workers (see Table 6.5).<sup>67</sup> Even assuming that there is a higher proportion of people who cannot afford to insure themselves among self-employed workers because incomes in the informal sector are low, it seems probable that a greater proportion of self-employed workers who can afford insurance contributions are not covered by the SNP.

6.53 If uninsured workers are compared to all private sector workers (coverage of public sector workers can be assumed to be 100%), on average, covered persons have lower levels of education, lower

<sup>66</sup> The Worker Protection Law approved in January 2000 makes insurance mandatory for self-employed workers. This clause has not yet taken effect, however.

<sup>67</sup> The increase in coverage of self-employed workers in recent years is due to a regulatory change in the IVM Insurance in 1997, in the sense that CCSS can only be obtained in combination with IVM Insurance.

**Table 6.6. IVM: average pension and replacement rate 1990-1999**

Year	Contributors' average salary <sup>1</sup>	Average nom. Pension	Real nominal Pension <sup>2</sup>	Replacement rate <sup>3</sup>
1990	23.4	10.5	23.5	45
1991	28.5	12.9	22.4	45
1992	34.6	14.6	20.9	42
1993	42.2	17.0	22.1	40
1994	51.6	18.9	21.7	37
1995	62.5	22.8	21.3	37
1996	73.4	27.1	21.5	37
1997	85.6	31.0	21.6	36
1998	98.9	35.5	22.2	36
1999	113.4	40.1	22.8	35

NOTE: values in thousands of

<sup>1</sup> Average reported salary of contributors.

<sup>2</sup> Base

<sup>3</sup> General replacement rate, in

SOURCE: CCSS and authors own

incomes, are more likely to live outside the Central Region and in rural areas, work less than full time and with greater seasonality. Therefore, there are more self-employed workers among the uninsured group [Castillo, Jacqueline, 2000, page 14].

**6.54 *The Pensions amounts and the replacement rate dropped in the IVM Insurance.*** With respect to the benefit levels, the IVM Insurance pensions have shown a slight loss of purchasing power during the nineties. Measured in 1995 prices and calculated as the expenditures on monetary benefits/number of pensioners, average real pensions went from 23,500 colones in 1990 to

22,800 colones in 1999, while the general replacement rate (average pension/average salary of contributors) dropped from 45% to 35% during the same period (Table 6.6).

## **Equity**

**6.55** In general, one pension system is more egalitarian than another if it guarantees a closer relationship between contributions and benefits. Equity is also greater if contributions and benefits are pro-poor and the poor have adequate access to the economic protection a pension system offers. Another equity criterion is the extent to which benefits are sufficient to provide the basic necessities for all sectors of the population. And lastly, the redistributive impact of a pensions system, either among income groups or among generations of members, is an important aspect of an analysis of equity. The traditional mechanisms to guarantee equity and solidarity are: minimum and maximum pensions, non-contributory benefits for the lowest income groups, access conditions to benefits, and the way the benefits are calculated.

**6.56** There is no available information for evaluating the SNP's overall redistributive impact, therefore, this section analyzes factors related to the main equity criteria, emphasizing the two principal programs: the IVM and the Non-Contributory Pensions Plan.

**6.57 *The IVM redistributive mechanisms are not transparent.*** The inter and intra-generational redistribution of benefits is a critical aspect of any pension system. The review of IVM indicates that the scheme has several problems that affect its progressivity and limit its effectiveness as a redistributive mechanism. The main issues are highlighted below.

**6.58** First, benefits are not calculated based on actual salaries. Workers tend to under-report their earnings during most of their working life, in order to minimize their contributions, and to over-report their earnings during the last years in which contributions are made in order to maximize the amount of their pension. Furthermore, workers with rising career paths throughout their working lives receive benefits calculated on their highest earnings during their career; there is evidence that this phenomenon is

greater among high income workers,<sup>68</sup> who are normally the ones with greater possibilities of negotiating with employers their reported salaries. In IVM, an analysis of a pensions sample in 1995 revealed that the ratio of the last reported salary to the average reported salary over the entire career is almost twice as high for upper-income members than for average contributors. Low and middle-income workers, who do not have the possibility of contributing based on a higher salary in the last years of work, will benefit from a higher benefit rate.

6.59 A second problem is that the benefit rate calculation formula is applied to a reference salary expressed in nominal terms, which can lead to imbalances between the calculation of benefits and the actual replacement rate at the time of retirement.

6.60 Third, the IVM benefits calculation formula encourages higher contributions for the first twenty years and then provides reduced benefits for additional contributions. The benefit rate for each year contributed during the first twenty, is close to 3% per year, while for subsequent years an additional 1% is provided for each year of contributions. If people with lower incomes have a lower contribution density (defined as the ratio of years contributed/years worked) than higher income people, the benefits/contributions ratio would be, on average, comparatively higher than that of higher income members, causing a progressive redistributive impact.

6.61 A fourth aspect is related to minimum pensions. Members who obtain a pension below 60% of the minimum salary contribution base have access to a minimum pension when the statutory benefit rate is applied. The result is a higher effective benefit replacement rate for people who qualify for the minimum pension and who, in theory, receive lower salaries, which becomes a redistributive mechanism in favor of low income members. It is important to point out that minimum pensions are directly financed by the IVM Insurance, with resources from the contributions of all member workers, so that the origin of this redistributive mechanism is not very transparent, especially if the contributions/benefits ratio is not based on criteria guaranteeing the actuarial balance. An additional topic that deals with equity in a pensions system refers to non-contributory pensions, designed to meet the basic needs of poor and extremely poor people. This component will be analyzed in the chapter on social aid programs.

6.62 The financing mechanism used by the IVM Insurance and by the other contributory programs fosters an intergenerational redistribution that disfavors the most recent members and younger generations. The medium and long term financial projections indicate that contribution rates must be gradually increased and benefit rates adjusted downwards to guarantee financial balance; therefore, future beneficiaries of the IVM Plan will probably contribute more and receive lower benefit rates.

6.63 It is difficult to measure the net redistributive impact of the mechanisms set out in the regulations, since some of them act in opposite directions, but the analysis of individual aspects seems to indicate that the net result is regressive and counterproductive to the long term objectives of the scheme. Future work should attempt to measure the net effect using longitudinal data.

### *Efficiency*

6.64 The efficiency of a pensions system depends on two variables: investment returns and the proportion of administration expenditure. Both determine the proportion of contributions that will effectively translate into benefits for members. If investment management is not good enough to guarantee adequate returns, and if administrative expenditures are high, part of the resources channeled to the system will not become available as benefits, translating into lower benefit rates. Another source of inefficiency deals with the process of managing benefit payments; if weak administration of a pensions

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<sup>68</sup> See Durán y Rodríguez. Op. Cit. Page 269.

program allows members without full rights to obtain benefits, or allows fraud in benefit claims, such as invalid pensions for people who continue to work, then too, the benefits available will ultimately suffer.

**6.65 Management of the IVM investments has improved.** Traditionally the IVM investment management has been characterized by a lack of political independence in investment decision-making regarding the selection of investment instruments. During the nineties the CCSS undertook a series of measures to improve the IVM investments management, to reverse the historically negative or below market real returns. The key elements were a renegotiation of the investment portfolio and design of financial instruments issued by the Government and the emergence of investment instruments in the market that guarantee positive real returns. During the 1990-1999 period real returns were close to 6%

**Table 6.7 IVM Structure and real investment yield, 1992-1999.**

Entry	1992	1993	1994	1995	1996	1997	1998	1999	Average*
<b>Percentual distribution</b>									
Total	<u>100.0</u>								
Securities	77.4	81.3	83.5	85.3	85.7	87.6	88.1	89.9	<u>84.9</u>
Mortgage loan	22.6	18.7	16.5	14.7	14.3	12.4	11.9	10.1	<u>15.1</u>
<b>Real feasibility</b>									
Total	<u>7.3</u>	<u>9.5</u>	<u>0.5</u>	<u>6.0</u>	<u>5.2</u>	<u>7.0</u>	<u>7.2</u>	<u>6.8</u>	<u>6.2</u>
Securities	7.4	7.9	-0.5	6.4	5.0	6.0	6.8	6.5	<u>5.7</u>
Mortgage loan	7.1	16.2	5.5	3.4	6.7	13.8	9.8	9.1	<u>9.0</u>

\* It refers to the simple average.

Source: CCSS. Actuarial and Economic Planning Management.

annually (Table 6.7). One of the most important decisions taken by the CCSS was the approval of the IVM Plan Investments Regulation in 1997.

**Table 6.8. IVM administrative expenditures. 1990-1999**

Year	% of total expenditures	% of total income	% of contribution income
1990	4.9	2.9	4.4
1991	5.3	3.2	5.1
1992	5.7	3.6	5.3
1993	7.5	4.8	6.8
1994	5.7	3.4	4.8
1995	5.6	3.1	4.8
1996	4.8	3.3	4.6
1997	7.1	4.9	6.5
1998	6.5	4.3	6.0
1999	4.5	2.8	4.1

SOURCE: CCSS and own calculations.

**6.66** About 90% of the IVM investments are concentrated in securities, and the rest are in mortgage credits. These investments are in securities issued entirely by Costa Rican public entities, with a high concentration of securities issued by the Central Government: 79% at the end of 1999. Even though the Regulations authorize investment in securities issued by private companies as long as they comply with the minimum classification requirements, the CCSS has not invested privately; this reduces diversification and returns and reduces the potential contribution to the Costa Rican securities market.

**6.67** *The IVM administrative expenditures are within acceptable efficiency margins.* Administrative expenditures ranged from 4 to 6.5 percent through the nineties. While there was some volatility, these expenditures remain low (Table 6.8). Calculating administrative expenditures as a percentage of the income from contributions shows that for every 100 colones contributed by the members an average of

between 4 and 7 colones were used for administrative expenses. This is low compared with other public and private base pension plans in the Latin American region.<sup>69</sup>

### Financial sustainability

6.68 The sustainability of the pension plans is intimately related in the short term with the provision of incomes to people who have suffered a reduction in capacity and over the long term with intergenerational equity.

#### *IVM Insurance: financial balance*

6.69 *The IVM scheme has an operating surplus.* Because IVM started operating with a complete capitalization financing scheme, the scheme has a high operating surplus: during the last decade, total expenditure was between 56 percent (1995) and 69 percent (1997) of total income (see right column, Table 6.9). In general, the trend shows large fluctuations. For example, in 1996 real income decreased by

Table 6.9. IVM – Income and Expenditures, 1990-1999

Year	Total income			Total expenditure			Expenditure/ Income <sup>2</sup>
	real <sup>1</sup>	% incr.	% GDP	real <sup>1</sup>	% incr.	% GDP	
1990	38.4		2.5	22.6		1.5	59
1991	38.1	-0.7	2.5	23.2	2.6	1.5	61
1992	38.3	0.4	2.3	23.9	3.1	1.5	62
1993	41.7	9.0	2.4	26.8	12.2	1.5	64
1994	46.5	11.4	2.5	27.6	2.9	1.5	59
1995	51.1	10.0	2.6	28.4	2.9	1.5	56
1996	48.2	-5.8	2.5	32.3	14.0	1.7	67
1997	48.4	0.5	2.3	33.5	3.5	1.6	69
1998	55.3	14.1	2.5	36.4	8.6	1.6	66
1999	63.4	14.7	2.6	39.8	9.4	1.6	63

<sup>1</sup> in billions of January 1995 colones, using the general IPC annual average. <sup>2</sup> in %.

SOURCE: CCSS, BCCR and own calculations.

almost 6 percent while expenditures rose 14 percent in real terms, changing the expenditure/income ratio from 56 percent to 67 percent in one single year. The level of expenditures and incomes as a percentage of GDP, however, shows a relatively stable tendency with a slight increase during the nineties.

6.70 *The income from contributions exceeds expenditures.* The IVM income has two important sources: the tripartite contributions and the interest earned on the reserve (Table 6.11). Contributions represent around 70% of total income. During the decade analyzed, the contribution revenues always exceeded expenditures, so it was not necessary to use the interest or reserves to finance expenditure.

6.71 *The IVM reserve currently plays a contingency back-up role.* The income from interest on the reserve amounts to roughly 50% of total expenditure. The reserve would cover expenditures for a period of less than three years. This situation points to a set of problems, ranging from policies that include a reduction in the pension requirements of the CCSS to policies that deal with resource transfer and beneficial loans to the CCSS in the 70's and 80's, and the high negative real returns on investments made in the seventies and eighties. Therefore, despite initially establishing a complete capitalization scheme, the IVM reserve currently plays a contingency back-up role, revealing a severe actuarial imbalance.

<sup>69</sup> An international comparison across Latin America of administrative expenditures of pension programs, is found in: Durán y Rodríguez. Costos e incentivos en la organización de un sistema de pensiones. CEPAL-ECLAC, Financiamiento del Desarrollo, Serie 98, June 2000.

6.72 To highlight this point, the Reserve Quotient (defined as the available reserve ratio at the beginning of one year and the expenditures in that year) went from 8.3 in 1980 to 3 in 2000; in other words, in 1980 there were 8.3 reserve fund dollars for each dollar spent, while in 2000 the IVM plan only had 3 reserve dollars for each annual expenditure dollar.

6.73 *Revenues from contributions and expenditure levels have remained stable.* IVM expenditure depends both on the number of pensioned persons as well as on the average pension paid out. Table 6.10

**Table 6.10. IVM – Insured Members and Pensioned Members, 1990-1999**

Year	Insured		Pensioned					
	total <sup>1</sup>	% incr.	Old Age <sup>2</sup>	Disability <sup>2</sup>	Death <sup>2</sup>	total <sup>1</sup>	% incr.	in % of Insur.
1990	500		33	34	33	63		12.5
1991	512	2.4	34	34	32	67	7.3	13.1
1992	545	6.4	34	33	32	74	10.8	13.7
1993	576	5.7	35	34	31	77	3.9	13.4
1994	596	3.5	35	33	32	83	7.0	13.9
1995	603	1.2	35	33	32	87	5.2	14.4
1996	617	2.3	35	33	33	93	7.0	15.1
1997	651	5.4	34	32	33	99	5.8	15.1
1998	705	8.4	34	32	34	103	4.7	14.6
1999	761	8.0	34	32	34	108	4.5	14.2

<sup>1</sup> in thousands of persons at June of every year. <sup>2</sup> in %

SOURCE: CCSS and own calculations.

shows the trends in the number of pensioners and their risk structure. The risk structure has remained almost unaltered over the period considered, with a slight decrease in disability cases. The number of pensioners, on the other hand, has grown significantly throughout the decade due to the “maturity” of the plan and the aging of the Costa Rican population. Pensioners increased from only 12.5 percent to 14.2 percent of insured members over the decade.

**Table 6.11. IVM Incomes structure, 1990-1999**

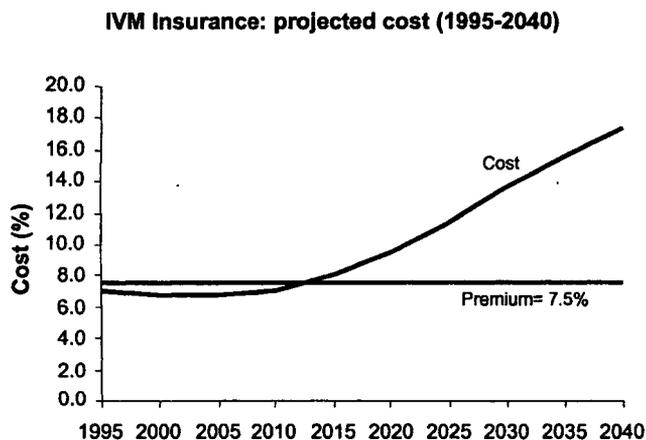
Year	Nominal income			Income per quotas		Interests	Resv. quotient <sup>1</sup>
	total	quotas	interests	Income %	Expenditure %	Expenditure%	
1990	17	11	6	66	112	56	
1991	22	14	8	63	104	59	2.8
1992	27	18	9	68	108	51	2.7
1993	32	23	9	70	110	45	2.6
1994	41	28	12	70	118	49	2.1
1995	55	35	19	65	116	63	2.7
1996	61	43	17	71	106	41	2.7
1997	69	52	15	75	109	32	2.8
1998	88	63	20	72	109	35	2.6
1999	111	76	31	69	109	45	2.7

NOTE: values in billions of ordinary colones. The percentages refer to total Income and Expenditure. <sup>1</sup> Reserve<sub>t-1</sub>/Total expenditure<sub>t</sub>, in years.

SOURCE: CCSS and own calculations.

6.74 The average pension, however, has experienced a lower growth rate than the contributors' average reported salary, causing the general replacement rate (defined as the ratio of the average pension/average contributed salary) to drop considerably from 45 percent at the beginning of the 90's to 35 percent at the end (Table 6.6). This decrease in the replacement rate has offset the effect on expenditures of the increase in the number of pensioners, allowing the ration of income from contributions to expenditure to remain almost constant, ranging from 108 percent, on average, in the 90-92 period, to a 109 percent average in 97-99 (Table 6.11). In summary, the IVM scheme short-term

Figure 6.2



financial balance has remained unaltered during the period analyzed. The increase in the expenditure/income ratio and the reduction in the reserve quotient, however, reveal that the IVM financing is evolving toward a zero capitalization scheme.

**IVM Insurance: actuarial projections**

6.75 A recent actuarial evaluation of the IVM Insurance, carried out by the CCSS in 1999, projects that the active/pensioned persons ratio will go from 6.7 active workers for each pensioned person in 1998 to 3.3 in the year 2040, mainly because of the plan's own maturity, and also because the Costa Rican population will age in the coming

decades.

6.76 This study projects that the IVM Insurance cost, measured by the expenditures/salaries ratio, will surpass the 7.5% contribution rate by the year 2012.<sup>70</sup> If no change is introduced, the Plan will become insolvent in the year 2028, when reserves run totally dry. One of the fundamental problems the Plan faces, that makes reforms complicated, is the persistence of a very large actuarial imbalance, as shown in Table 6.12.

Table 6.12. IVM Insurance: projected financial flows

Years	Income per quota	Interests	Other incomes	Total Incomes	Total Expenditures	Net Incomes	Reserve	Cost
1998	62,675	30,302	4,403	97,380	57,446	39,934	198,500	6.9
2000	89,099	36,293	891	126,283	79,951	46,332	284,523	6.7
2005	188,922	81,698	1,889	272,509	168,671	103,838	673,842	6.7
2010	369,324	167,697	3,693	540,714	347,639	193,075	1,452,198	7.1
2015	678,633	305,254	6,786	990,673	723,493	267,181	2,663,284	8.0
2020	1,221,560	446,724	12,216	1,680,500	1,540,886	139,613	3,773,022	9.5
2025	2,164,693	313,346	21,647	2,499,686	3,283,970	-784,284	2,211,945	11.4
2030	3,772,855	-955,359	37,729	2,855,225	6,812,879	-3,957,654	-9,866,564	13.5
2035	6,602,735	-5,568,233	66,027	1,100,529	13,666,772	-12,566,243	-52,333,085	15.5
2040	11,494,184	-18,670,686	114,942	-7,061,560	26,617,148	-33,678,708	-171,301,408	17.4

Source: CCSS, Actuarial Management. Actuarial Evaluation July 1999.

<sup>70</sup> Previous actuarial evaluations, based on different projection hypotheses, foresaw a collapse of the premium in a shorter time. Subsequent reviews have lengthened the period during which the balance between income and expenditure will be maintained if the contribution rate remains fixed at 7.5%.

6.77 It is important to highlight that in technical terms, the current level of reserves with which the Plan operates is insufficient to finance the benefits that pensioners will receive, even under the most optimistic assumptions about rates of return. The accumulated reserve at the end of 1998 was only able to cover approximately three years of expenditure.<sup>71</sup>

6.78 In summary, the IVM scheme is not sustainable over the long term under current conditions, since costs will rise greatly, and be difficult for the Costa Rican economy to cover. This conclusion was a critical motivating factor stimulating the creation of the complementary pillar of private pensions rather than reducing the replacement rates (pension amount as a percent of salary) of the base pension plans.

### ***National Teachers Association: financials***

6.79 Since June 1992, this system has consisted of two plans, a Capitalization Plan and a Distribution Plan. The first includes a complete capitalization scheme and is very recent. Because of the short life of the plan it does not yet have any expenses. For this reason the financial equilibrium analysis refers only to the Distribution Plan. The availability of data for this plan is unfortunately restricted to the 1994-1999 period.

**Table 6.13. National Teachers' Association  
Income and Expenditures, 1994-1999**

Year	Total income		Total expenditure			Expenditure/ Income <sup>2</sup>
	real <sup>1</sup>	% incr.	real <sup>1</sup>	% incr.	GDP %	
1994	13.7		19.9		1.1	145.5
1995	10.0	-27.2	22.0	10.2	1.1	220.2
1996	10.8	8.6	24.6	11.8	1.3	226.7
1997	10.4	-4.1	27.2	10.7	1.3	261.6
1998	11.5	11.1	29.3	7.8	1.3	254.0
1999	12.2	5.8	31.7	8.2	1.3	259.7

<sup>1</sup> in billions of January 1995 colones, using the general IPC average.

<sup>2</sup> in %.

SOURCE: Ministry of Finance (DGNP), BCCR and own calculations.

6.80 ***The Distribution Plan was closed down in 1992, so the financial balance will deteriorate over time.*** The National Teachers Association Distribution Plan does not have reserves and its incomes are insufficient to cover expenditures. With Law 7302, the fund's income was cut off as no new contributors will be enrolled in the future. Additionally, in 1995 the number of active direct insured members fell as a consequence of Law 7531.

6.81 Table 6.13 shows that the fall in active insured members in 1995 led to a contraction in real income of 27.2 percent and an increase in the expenditure/income ratio from 145 percent to 220 percent. Beginning this year, total expenditure rose as a result of the plan's "maturity" and the trend in real average pensions (Table 6.14). The revenue reflects the changes introduced by the 1995 reform, and the real salary increase of insured members. The contraction of real revenue in 1997 was due to the voluntary transfer of several thousand insured members to the CCSS IVM Insurance when a decree was published regulating the transfer of workers and contributions from the SPJMN. The outcome is that by 1999 expenditures represented 260% of the Distribution Plan's revenues.

6.82 Table 6.14 shows the fall in Government contributions beginning in May 1995. The table also shows that revenues comprise mainly workers' and pensioned persons' contributions. The Distribution Plan deficit is financed by government transfers from the central budget, which have stabilized in the last three years at around 61% of expenditures, equivalent to 0.8 percent of GDP. Because the plan was

<sup>71</sup> Not all of the reserve is available in the form of sufficiently liquid financial assets.

closed down in 1992, in future the program must be totally financed by a government subsidy and the contributions of the same pensioned persons.

**Table 6.14. National Teachers' Association – Financing and Pensioned Persons, 1994-1999**

Year	Income (quotas)		Deficit (state subsidy)			Pensioned persons <sup>2</sup>	Real pension	
	total	State <sup>1</sup>	total	GDP %	Expenditure %		average <sup>3</sup>	% crmt.
1994	11.9	3.6	5.4	0.3	31	19.6	78.4	
1995	10.7	1.1	12.9	0.6	55	20.9	81.0	3.4
1996	13.7	0.1	17.3	0.7	56	21.3	88.6	9.4
1997	14.9	0.1	24.0	0.8	62	23.0	90.8	2.5
1998	18.4	0.1	28.4	0.8	61	24.7	91.3	0.5
1999	21.5	0.1	34.3	0.8	61	25.6	95.4	4.5

NOTE: Income and deficit in billions of ordinary colones. <sup>1</sup>State contribution.

<sup>3</sup>Total expenses per pensioned per month, in thousands of colones of 1995, using the annual average of the general IPC

SOURCE: Ministry of Finance (DGPN), BCCR and own calculations.

### ***National Teachers' Association: actuarial projections***

6.83 **The *Distribution Plan deficit will increase as a percentage of GDP.*** The actuarial projections for the Distribution Plan, carried out under the 1998 Integral Pensions Reform Program, project a gradual deficit increase: starting in 2005 there will be a shortfall of 38.5 billion colones at 1995 prices (76 percent of total expenditure), by 2015 the deficit will reach 48.3 billion colones (88 percent of expenditures), and finally it will gradually be reduced to 42.9 billion colones in 2020 (90% of expenditures), 33.9 billion in 2025 and 8 billion in 2040. The deficit as a percentage of expenditures remains at 90 percent as of 2020 because after the 1995 reform, pensioners contributed 10 percent, the same as insured members.

6.84 In real terms, the deficit covered by the central government in 1999 for the Distribution Plan rose to 19.6 billion (January 1995) colones. For the year 2015 it will have grown 146 percent, an average rate of 5.8 percent annually during the period. Taking the average growth of the Costa Rican economy between 1990 and 1999 of 5.5% as a reference point, the government subsidy to the Distribution Plan will not only increase in real terms, but also as proportion of GDP until the year 2015.

6.85 **The *Capitalization Plan is not sustainable over the long-term.*** With respect to the Capitalization Plan, there are no actuarial projections at this point. Its law stipulates that benefits and requirements must be defined by the National Teachers Association Pensions and Retirement Board that administers the Fund, so that benefits may be totally financed by the Fund's incomes. This requirement is supervised by SUPEN. However, the plan has an imbalance between the actuarial value of its benefits and contributions. It is calculated that in order to finance the benefit profile it promises, it will have to increase its contribution rate by 2 or 3 percentage points.

### *Special Plans under the National Budget: financials*

6.86 The Special Plans under the central budget include 12 plans (except the SPJMN). Five of these plans do not make contributions to the fund a requirement for obtaining benefits. Six are contributory<sup>72</sup> and one is mixed.

6.87 *There persists a high government subsidy in the Special Plans financing.* The government subsidy reaches 89 percent of expenditures and represents 0.6 percent of GDP. Table 6.15 shows that the revenues of the contributory plans have dropped in the last five years in real terms. Expenditures, on the other hand, have increased 46 percent during the same time. Consequently, the expenditure/income ratio has gone from almost 5 in 1994 to over 10 in 1999.

**Table 6.15. Special Plans – Income and Expenditures, 1994-1999 (in millions of 1995 colones)**

Year	Contributive Plans					Non-Contr. Plan Expenditure	Total expenditure		
	Income		Expenditure		Expenditure/ Income <sup>1</sup>		real	% incr.	GDP %
	real	% incr.	real	% incr.					
1994	2.4		10.8		497	0.9	11.7		0.6
1995	1.9	-19.0	12.5	15.1	698	0.8	13.3	13.6	0.7
1996	1.7	-13.0	13.8	10.9	892	1.0	14.8	11.2	0.8
1997	1.4	-13.5	14.6	5.8	1,071	0.7	15.4	3.9	0.7
1998	1.8	28.9	14.6	-0.4	858	1.3	15.9	3.3	0.7
1999	1.7	-7.9	15.8	8.5	1,012	1.4	17.2	8.6	0.7

NOTE:<sup>1</sup> in %.

SOURCE: Ministry of Finance (DGNP), BCCR and own calculations.

6.88 Even though expenditures by the non-contributory plans are less than 10 percent of the expenditures of contributory plans, their growth has been greater during the last five years, going from 880 million to 1,43 billion in January 1995 colones (a 62% increase). The total expenditure of the Special Plans has increased from 11.7 billion colones in 1994 to 17.23 billion colones in 1999 in real terms (a 47% increase), causing the total expenditure of the Special Plans to go up from 0.6 percent to 0.7 percent of GDP.

6.89 The contributory plans' income structure shows a slight drop in government contributions starting in 1995 (Table 6.16). Thus, the deficit increased that year from around 78 percent to almost 85 percent of expenditure. In the following years this percentage remained at slightly under 90 percent. Due to the reduced weight of the non-contributory plans within the Special Plans, the total government subsidy (deficit of the contributory plans + non-contributory plans expenditure) in 1999 only increased 10 percent from 24.8 billion colones to 27.3 billion, a sum equivalent to 90.1 percent of the total expenditure of the Special Plans and to 0.6% of GDP.

<sup>72</sup> None of the plans include an employers' contribution.

**Table 6.16. Special Plans – Financing, 1994-1999**

Year	Contributive Plans					Non-Contrib. Plan Expenditure	State subsidy		
	Income (quotas)		Deficit				total	GDP %	Expenditure %
	total	State <sup>1</sup>	total	GDP %	Expenditure %				
1994	2.1	0.45	7.4	0.5	78.3	0.8	8.2	0.5	79.9
1995	2.0	0.01	11.3	0.5	84.7	0.9	12.2	0.6	85.7
1996	2.1	0.02	15.4	0.6	88.0	1.2	16.6	0.7	88.8
1997	2.0	0.01	18.9	0.6	90.2	1.0	19.9	0.7	90.7
1998	3.0	0.03	20.3	0.6	87.3	2.1	22.4	0.6	88.4
1999	3.0	0.02	24.8	0.6	89.2	2.5	27.3	0.6	90.1

NOTE: Amounts in billions of ordinary colones. <sup>1</sup>State contribution.

SOURCE: Ministry of Finance (DGPN), BCCR and own calculations.

6.90 Changes in the number of pensioned persons and the pension average are practically the same as the contributory plans (Table 6.17). For the contributory plans, pensioned persons increased by about 24 percent from 1994 to 1999 and the average pension increased 17 percent in real terms. The real expenditure of the contributory plans increased less rapidly than the number of pensioned persons. On the other hand, the growth in real expenditures of the non-contributory plans (62%) is almost exclusively due to the increase in pensioners, since the average real pension has only increased slightly, by 7 percent during the 5 years considered.

**Table 6.17. Special Plans – Pensioned Persons, 1994-1999**

Year	Contributory Plans			Non-Contributory Plans			Special Plans		
	Pensioned persons <sup>1</sup>	Real pensions		Pensioned persons <sup>1</sup>	Real Pensions		Pensioned persons <sup>1</sup>	Real Pensions	
		average <sup>2</sup>	% incr.		average <sup>2</sup>	% incr.		average <sup>2</sup>	% incr.
1994	11.9	70.2		3.5	19.4		15.4	58.6	
1995	12.9	74.5	6.1	3.5	18.1	-6.8	16.4	62.3	6.3
1996	13.5	78.7	5.6	3.9	19.3	6.7	17.4	65.5	5.1
1997	14.1	79.8	1.4	4.2	13.3	-30.9	18.3	64.5	-1.6
1998	14.6	76.5	-4.2	5.0	19.9	49.3	19.7	62.1	-3.7
1999	14.8	82.2	7.5	5.3	20.7	4.0	20.1	66.0	6.3

<sup>1</sup>Thousands of persons in June of each year. <sup>2</sup>Total expenditure per pensioned person per month, in thousands

of January 1995 colones, using the general IPC annual average.

SOURCE: Ministry of Finance (DGPN), BCCR and own calculations.

6.91 In conclusion, the financial balance of the Special Plans has remained fairly stable over the last six years due to the government subsidy that represents a constant proportion of 0.6% of GDP. The government subsidy has increased in real terms to compensate for lower revenues and increases in total expenditures (due to closure in 1992 it cannot enroll new members and thus revenue from contributions is zero).

### ***Special Plans: actuarial projections***

6.92 ***A continuous decrease in the government subsidy as percentage of GDP is foreseen as of 2005.*** The latest actuarial projections for the Special Plans were carried out in 1996 by an Evaluation Committee under the Integral Pensions Reform<sup>73</sup> project. According to the projections, by 2005 the deficit will reach

<sup>73</sup> The statistical data accessed only refer to Special Plans in consolidated form without making a distinction between contributory and non-contributory plans.

its peak of over 21 billion colones in 1995 prices (91.1% of the total Special Plans expenditure), and then gradually drop to 19.4 billion in 2015 (91.9% of expenditure), 12.5 billion in 2025 (92.2% of expenditure) and 3.8 billion in 2040 (92.7% of expenditure).

### ***Judicial Branch: financials***

6.93 ***The available data are insufficient to evaluate the financial situation over the short and long terms.*** Its financial scheme is not included in the corresponding law and there are no statistics on its financial or actuarial condition. There is only one estimate made based on the CCSS payrolls in October 1996 by Rodríguez and Durán [1998; pages 189-90]. The results are displayed in Table 6.18.

**Table 6.18. Judicial Branch – Parameters 1996**

Incomes per quotas <sup>1</sup>	2.2
Pensions expenditure <sup>1</sup>	2.4
Expenditure/quotas (in %)	109.6
Annual expenditure in GDP %	0.12
Active Insured members	8014
Contributable average salary (in thousands)	102
Pensioned persons	1456
Average pension (in thousands)	128
Pensioned/Insured persons (in %)	18.2
General Replacement rate (in %)	125.7

<sup>1</sup> In billions of ordinary colones. Values estimated at October 1996.

Source: Rodríguez and Durán [1998], page. 189

6.94 This plan has the lowest expenditure, equivalent to 0.12% of GDP. Because its expenditure/contributions ratio is over 100%, this plan draws on its reserve to cover its normal expenditures. It also has greater maturity than the IVM Insurance, since pensioned persons represent over 18% of active insured members (IVM: 15.3%).

6.95 The general conclusion is that the available data are insufficient for evaluating this plan's short and long term financial situation.

### ***Achievements and Pending Agenda***

6.96 The reforms carried out during the 90's produced important changes in the composition of the SNP and affected the long term sustainability of the pension system. Many of these reforms have already produced important financial savings. Other will require additional change and further consolidation to guarantee that all Costa Ricans will be able to benefit from a proper pension and social protection in old age. Below are the main achievements and unfinished agenda in the Costa Rican pensions system reform.

#### ***What was accomplished?***

6.97 ***Most of the privilege plans were closed down and unified.*** With the 1992 and 1995 reforms, a great deal of special pensions programs were closed down and unified. Their requirements and benefits were rationalized to achieve uniformity. Because the actuarial value of benefits was consistently greater than the actuarial value of contributions, the reforms produced an important reduction in actuarial liabilities that must be financed by the central budget. As a result, the government subsidy necessary to cover expenses dropped considerably, even though in the short-term an increase in fiscal expenditure was needed to meet acquired rights.

6.98 It is important to point out that the creation of the National Teachers Association Capitalization Plan, which replaced the former Distribution Plan, set a foundation to guarantee the plan over the long-term. A Capitalization Plan has the advantage that its actuarial balance is not affected by the demographic transition in Costa Rica, and it also eliminates, or noticeably reduces, intergenerational subsidies.

6.99 ***There was progress in introducing private schemes within the system.*** With the development of voluntary private plans, and the creation of the second pillar of the complementary defined pensions, the foundation was set to move toward substituting private coverage for part of the protection currently provided by public plans. In future, adequate reduction in public base plans' replacement rates (pension entitlements as a percentage of salary) will reduce the actuarial liabilities and overall cost of the pension system.

6.100 ***Supervision regulation and system controls were improved.*** The creation of the SUPEN in 1995, and the reinforcement of its powers set out in the 2000 reform constitute an indispensable step for developing an efficient and functional financial market. This reform created regulations and supervision mechanisms for private and public actors in the system.

6.101 ***Steps were taken to increase coverage among the self-employed population.*** Not only did coverage of the self-employed population increase considerably in the nineties, but the 2000 reform also introduced mandatory affiliation. It is expected that in the future, as the CCSS implements adequate measures to extend coverage, coverage will increase even more.

6.102 ***There was an improvement in the investment returns of the IVM.*** The real returns on the IVM investments improved from the mid-nineties onwards as a result of diverse actions that included portfolio restructuring and renegotiating, investment in financial instruments that guarantee positive real returns and approval of investment management regulations. Most investments, however, are still in public sector financial instruments, despite the availability of options in the market to invest in privately operated fixed yield instruments that are duly regulated and supervised.

6.103 ***Administrative expenditures remained within acceptable margins.*** Despite considerable fluctuations, the IVM Insurance administrative expenditures remained within margins considered acceptable in comparison with current levels in other public and private plans in the Latin American region. Inadequate data does prevent assessment of the administrative costs for the other public pensions plans that operate in the country.

6.104 ***The Unfinished Agenda.*** In future it will be impossible to postpone consolidation of the reforms intended to achieve greater efficiency, equity and long term sustainability of the SNP. Below are the main elements that would contribute to these objectives.

6.105 ***Reduce replacement rates and future costs.*** Consolidation of a mixed pensions system demands that replacement rates be adjusted down to an acceptable level from the point of view of future implied costs. The current rates are extremely high and are not economically sustainable in the long-term.

6.106 ***Expand coverage.*** In order to expand coverage, improvements are needed in membership management and control of contributions, since a good proportion of the working population with the capacity to contribute, is not enrolled in the contributory programs. On the other hand, in accordance with the mandatory enrollment of self-employed workers established in the law of 2000, the CCSS must define a strategy for expanding coverage.

6.107 ***Modify the allowance calculation formula.*** A review of current redistributive mechanisms and establishment of a calculation method that encourages greater transparency in the relationship between contributions and benefits are needed; including expanding and indexing the reference salary, and modifying the benefit rate scheme, in order to reduce inequity, contribution evasion and the deterioration of actuarial imbalances.

6.108 **Improve payment rates and management of the Non Contributory Pensions.** The current RNC allowances are insufficient to cover basic necessities of beneficiaries and the beneficiary classification process is inefficient.

## SOCIAL ASSISTANCE

6.109 A key pillar of any social protection strategy is the use of social sector spending to support social assistance programs that are targeted to the poor. Social assistance programs that are well-targeted have clear mechanisms to identify beneficiaries and target resources to the poorest individuals and only limited support to middle and upper-income individuals. This chapter examines the main social assistance programs financed by public spending and evaluates their performance in terms of targeting and overall effectiveness. These programs, though limited in magnitude, present a key opportunity to improve the coverage of social sector programs and the welfare of the most vulnerable and poorest groups. Social assistance programs play a vital role in the poverty reduction strategy, helping to improve the poorest groups' social status indicators.

6.110 Efforts to reduce poverty and to improve value for money in the social sectors will require that limited resources are targeted to those who need them most and to where the marginal impact will be the greatest. The idea is not to convert the government into a permanent provider of subsidies, but rather to provide specific targeted subsidies to reduce conditions that lead to poverty. In addition, many social assistance programs can leverage actions in education or health thereby multiplying their effect and improving value for money.

6.111 This section of the public social expenditure analysis is an important input to the development of a social protection strategy in Costa Rica. Its main objective is to understand the current situation regarding social protection programs and to provide a framework to improve the focus, efficiency and monitoring/evaluation of the programs. The report also covers three additional areas: (i) support to the Government to identify coverage gaps in: services for key low income at-risk groups, such as children under four years old in conditions of extreme poverty lacking adequate nutrition; education and stimulation programs, youth programs, and assistance for the elderly poor who are not covered by the formal pensions system, and; (ii) empowerment and modernization of institutions related to social protection, including simplifying the activities performed to reduce costs and offer better services; adoption of new systems for providing services that involve communities and NGO's and complement the activities of public sector agencies; introduction of modern, transparent and efficient targeting mechanisms that have been proven in other countries; and (iii) systematic introduction of evaluation and monitoring systems for social assistance programs.

### Sector structure

6.112 The social protection network in Costa Rica consists of three pillars. The first pillar is the *Fondo de Desarrollo Social y Asignaciones Familiares* (FODESAF) which functions as a financing agency for most national level programs. FODESAF receives budgetary funds from the Finance Ministry through the collection of certain specific taxes designated for this purpose. The FODESAF amounted to 1.4 percent of GDP in 1999.<sup>74</sup> The second is the *Instituto Mixto de Ayuda Social* (IMAS) which runs a set of social programs for poor and high risk groups. The IMAS has great flexibility in designing and financing programs, and is capable of acting very quickly in social and economic emergencies, to provide direct monetary support to families. The third is *the line ministries* such as the Ministry of Health, that operates nutrition and child care centers (*CEN-CINAI*); The Ministry of Education, responsible for a school food program (*Comedores Escolares*) and a scholarship program, as well as for other social welfare programs

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<sup>74</sup> FODESAF expenditures are in a category called "Paid resources".

for students, and the Housing Ministry, responsible for the housing bond program. Additionally, there are a great number of non-profit organizations and foundations that receive FODESAF or IMAS funds to support social programs directed to elderly or disabled people, abandoned children and other risk groups.

### Analysis of FODESAF expenditure

6.113 The review of social assistance performance begins with an analysis of FODESAF financing, given the importance of this mechanism in financing diverse social aid programs. This section reviews the trends and structure of FODESAF resources from 1990 to 2000. FODESAF has nearly forty executor units; 90 percent of the Institution's expenditure goes through the ones listed in Table 6.19. The "Others" category groups a large number of executing units including, among others, the National Emergency Commission, the National Production Council and the Agrarian Development Institute.

6.114 Real expenditures doubled over the decade but there was considerable variation among executing agencies. Growth slowed significantly from 1994 onwards and many of the executing agencies actually received fewer resources in 1999-2000 than in 1993. Allocations to all executor units, except for the Ministry of Public Education, decreased in real terms in five of the ten years, though the reductions occurred at different times for the various units. The greatest reductions are for the IMAS in 1994 (-28%)

**Table 6.19. FODESAF, Allocated resources, 1988-2000  
(billions of 1995 colones)**

Year	CCSS - Article 4 Law 5662	IMAS - Institute for Social Assistance	Housing Mortgage Bank (BANHVI)	Ministry of Public Education	Ministry of Health - OCIS	PANI - National Agency for Child Welfare	Others	Total
1988	2,777.7	0.0	4,279.4	503.2	3,749.0	634.5	4,843.4	16,787.3
1989	2,544.4	137.3	4,576.9	1,478.5	2,280.9	612.9	3,672.2	15,303.1
1990	3,054.9	262.1	4,598.8	1,913.7	3,500.0	644.1	1,811.8	15,785.5
1991	2,564.7	479.7	5,509.7	1,215.6	2,801.1	695.8	1,696.5	14,963.1
1992	4,115.5	980.5	7,248.9	1,342.3	2,416.6	643.6	3,432.0	20,179.5
1993	3,925.4	3,692.4	7,133.0	2,011.2	2,905.7	771.7	2,208.7	22,648.0
1994	4,585.3	2,650.3	7,419.1	2,235.2	3,087.2	1,307.8	2,786.5	24,071.4
1995	4,420.7	2,695.3	6,366.4	2,626.4	2,704.9	1,070.5	3,823.4	23,707.6
1996	7,130.0	2,529.6	8,208.3	2,787.4	2,629.7	1,048.3	4,438.6	28,771.9
1997	6,780.8	3,245.2	6,213.6	3,463.7	2,448.1	1,259.0	5,293.1	28,703.5
1998	7,265.9	3,120.2	10,056.0	4,001.1	1,915.0	1,220.0	4,165.9	31,744.1
1999	6,566.7	1,280.7	11,555.1	4,309.8	2,163.0	1,593.8	3,597.0	31,066.1
2000	7,013.4	3,570.3	10,976.6	4,440.1	2,304.6	1,729.8	3,902.8	33,937.5

Source: Information provided by FODESAF.

and 1999 (-59%).

6.115 The three largest expenditure programs under FODESAF (from 1990-96) were under the Housing Mortgage Bank (BANHVI), CCSS and the Ministry of Health, after which reforms reduced the role of MOH in service provision. The FODESAF budget is just more than 1% of GDP, with the most significant executing agencies accounting for about one half percent of GDP. Once the results of the main programs are analyzed it will be possible to determine if the assigned budget is low and if resource management has been inefficient.

6.116 It is important to point out that FODESAF has serious financing limitations that undermine the effectiveness of its financial management process. The main problem is related to the fact that the Ministry of Finance often withholds funds that are earmarked for FODESAF, to try and reduce fiscal deficits. On average, during the 1990-2000 period, only 63 percent of the budgeted funds were

effectively disbursed to FODESAF. However, the proportion of budgeted funds disbursed has been increasing over time and reached nearly 66 percent in 1999.

### Social Assistance Programs in the Education Sector

6.117 There are four equity-related school programs in Costa Rica: (a) *School Vouchers*, an annual tuition scholarship (about US\$30 per student) granted to the poorest students to cover expenses at the beginning of the school year; (b) *Student Transportation*, a subsidy for school transportation; (c) The *School Scholarship*, a scholarship directed toward increasing school attendance among high-risk students; and (d) the *School Lunch*, a school nutrition program. Table 6.20 shows that in 1999 total expenditures on targeted education programs reached US\$34.3 million, roughly 5 percent of the education sector budget in 1999. In terms of expenditures, the School Lunch program is the biggest equity-related program in Costa Rica.

Table 6.20. Expenditures in programs favoring equity in the education sector, 1999

Program	Expenditures (millions of \$)	Number of Beneficiaries
School Vouchers	2.66	100,000
Student Transportation	6.38	37,000
School Scholarship	2.29	20,000
School Lunches	23.05	470,000
TOTAL AMOUNT	34.38	-

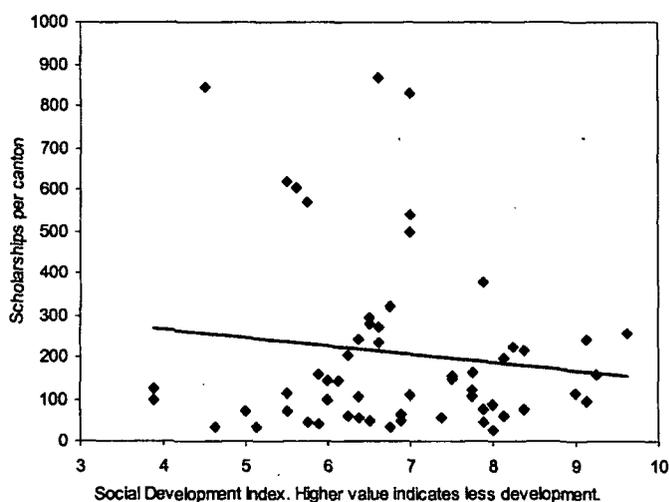
6.118 *School Voucher* benefits reach only 40 percent of the poorest families. The *School Lunch* program reaches only 34 percent of potential beneficiaries in the lowest 2 income deciles.<sup>75</sup> This program includes two subsidiary programs called *Education Boards* and *School Patronage* that provide subsidies to local parent associations. There is little available information on the *Student Transportation* program, except that it is directed to poor children in rural areas that need a subsidy to encourage them to attend high school. Both programs need good mechanisms to identify and select beneficiaries, since in many cases aid is provided to families that do not require targeted public subsidies.<sup>76</sup>

6.119 Analysis of the MEP data suggests that School Scholarships are not well targeted. The MEP uses a basic necessities index called the "Social Development Index" to assign a priority to each geographic area. According to the information provided by the MEP budget unit, 5,000 scholarships were granted in "rich" *cantons* not on the MEP high priority list. The remaining 12,000 scholarships went to highly developed cantons (Social Development Index = 3), measured on a continuous scale. The distribution of scholarships across the Social Development Index (Figure 6.3) shows the lack of a positive correlation between the two sets of data (*canton* size is not included in this analysis, since cantons all have approximately the same number of students, despite some dissimilarities overall).

<sup>75</sup> This issue is analyzed below in the nutrition section of this chapter.

<sup>76</sup> In this type of program that provides universal services, there is no discrimination between poor and non-poor. According to estimates by the SIPO close to 60% of the children attending CEN-CINAI are not poor.

**Figure 6.3. Number of scholarships per canton vs. the Social Development Index.**



6.120 The equity empowerment programs in the education sector are financed by FODESAF. The United Nations Development Program (PNUD) office in Costa Rica is currently working with the MEP and other governmental agencies to improve the efficiency and equity focus of the core programs. The MEP reform project, called the Education Equity Modernization Project is expected to lead to more targeted programs. Beneficiaries will be identified through a household database called the *Target Population Information System (SIPO)*, developed by IMAS, which classifies households by poverty level and then determines eligibility to receive government subsidies.<sup>77</sup>

### Social assistance programs in the pensions sector

6.121 The Non-Contributory Pensions Plan (RNC) is a social assistance program created in 1974 under the “Social Development and Family Assignments Law”. The objective was to provide economic aid to people living in conditions of extreme poverty who are not protected by any of the contributory pension plans in the country. The plan is run by the CCSS, as an additional program to the Disability, Old Age and Death Insurance (IVM). Its target population are people whose per capita family income is 50% or less than the IVM minimum old age pension, and who qualify in one of the following categories (by order of priority): people over 65 years old, people with physical or mental handicaps, abandoned widows, orphaned minors and others.

6.122 Estimates carried out by the CCSS indicate that the proportion of people aged 65 years or older receiving a pension grew between 1988 and 1996, so that in this last year 34% of this group received a contributory pension, and 19% a non-contributory pension (granted by the RNC). In total, 63.5 percent of the elderly population receives some type of pension, but the remaining 35 percent do not have effective protection when they reach old age.

6.123 The low benefit levels provided by the non-contributory pensions exacerbate the gaps in coverage. At present levels, the RNC pension does not provide adequate economic protection against poverty. The calculation of RNC benefits has two weaknesses. First, the poverty line<sup>78</sup> established by INEC assumes a four person household. Because of economies of scale available to a four person

<sup>77</sup> More details can be obtained on the project for modernizing the delivery of all the programs to achieve greater equity in the following document published by the UNDP Costa Rica– “Documento de Proyecto de Modernización del Programa de Equidad en Educación MTSS/IMAS/MEP/PNUD/COS/2000/006/A/001/099” by Dr. Lorenzo Guadamuz.

<sup>78</sup> The poverty line is calculated by INEC, based on the cost of a basic basket of products and other necessities. In 1999, the poverty line was set at ₡ 22,151 for urban areas and ₡ 17,509 monthly per capita (US\$ 71 and US\$56, using an exchange rate of ₡312 per US\$), in rural areas. The cost of the basic food basket (extreme poverty line) was set at ₡ 10,181 monthly per capita for urban areas and ₡ 8,818 for rural areas (US\$ 33 and US\$ 28).

household, the per capita income calculated for a four person household may be insufficient to satisfy the basic needs of a single person, unless they share their expenses with at least three other persons.

6.124 Second, benefit calculations make it impossible for the RNC to provide effective income protection for the elderly. The scale economies at household level are implicitly acknowledged by the RNC in Article 9 of its Regulations, which says that the “basic sum” will be increased by 10 percent for each beneficiary dependent up to a maximum of 30% for three or more dependents. Consequently, a four-member household receives 32.5 percent of the income level of the poverty line set for a four-person household—this is clearly a sum that by definition is insufficient to reach the poverty line.

6.125 The RNC also suffers from limitations in the application of instruments for means testing. Studies on the incidence of benefits indicate that fewer than 50 percent of RNC beneficiaries are in the poorest income quintile. The remaining 50 percent are distributed among the next wealthiest 40 percent of the population.

**Table 6.21. Cumulative distribution of the Non-Contributory Pensions Program beneficiaries, 1999 (%)**

Quintile	Non-Contributory Pensions
1	45
2	69
3	84
4	96
5	100

Source: Solidarity Plan, based on the 1999 Multiple Purpose Household Survey

6.126 The monthly pension amount was ₡10,000 in the year 2000 (close to US\$33), equal to 20 percent of the minimum salary or approximately half of the poverty line. According to data obtained from SIPO, in 2000 nearly 14,000 persons (approximately 50% of the elderly below the poverty line) were not covered by any pension plan.

### Social Assistance Programs in the Housing Sector

6.127 The Family Housing Voucher (BFV) was created in 1987 and is administered through the Housing Subsidies (FOSUVI). FOSUVI’s objective is: “...that low income families have the possibility of owning a home suited to their needs and socio-economic possibilities and that the Government guarantee this benefit ...”.<sup>79</sup> One of the ways of providing FOSUVI benefits is through BFV.

6.128 The Housing Mortgage Bank (BANHVI), the entity in charge of administering FOSUVI, sets the requirements and specific procedures to apply for this benefit, but there seem to be difficulties in defining the target population when distributing this benefit. Table 6.22 shows how the vouchers have been distributed in the last years, according to official statistics.

<sup>79</sup> National Housing Financing System Law, article 46.

**Table 6.22. Number of bonds granted by income level, 1990-1999**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total bonds</b>	15,453	15,007	15,239	16,848	9,398	15,705	17,425	20,287	10,652	6,602
First stratum	5,411	6,835	7,407	7,447	4,245	9,155	11,848	15,162	7,430	4,229
Second stratum	4,360	4,494	5,017	6,324	3,998	5,622	5,014	4,540	2,834	1,933
Third stratum	3,032	2,193	1,932	2,177	877	799	498	513	338	362
Fourth stratum	2,650	1,485	883	900	278	129	65	72	50	78

Source: Ministry of Housing

6.129 The 1999 Household Survey included a Basic Social Services module which asked households if they had received the BFV and during which government. Analysis of these data presented in Table 6.23 shows that housing vouchers have become more progressive over the years.

**Table 6.23. Cumulative distribution of Housing Bonds, by income quintile and presidential period.**

Quintile	1986-1990	1990-1994	1994-1998	1998-1999
1	14.6	18.8	21.7	31.9
2	43.0	39.0	46.8	65.2
3	64.2	66.1	73.8	83.0
4	83.8	86.2	91.6	94.4
5	100.0	100.0	100.0	100.0

Source: Calculations based on data from the 1999 Household Survey.

6.130 **Cost of Family Housing.** In order to analyze the costs of the BFV grants, data provided by the FODESAF Evaluation Area for the first trimester of 2000 were analyzed. During the first trimester of 2000, a total of 2,491 Family Housing Bonds were granted, corresponding to 66% of the goal for that trimester. Total transfers provided by the Housing Subsidies Fund (FOSUVI) were €3.23 billion, with an average amount of €1.3 million for each bond (Table 6.24).

6.131 The National Housing Financing System Operations Regulation stipulates in article 3 that "...the Housing Mortgage Bank shall establish the administrative costs necessary for processing the Bond and the other subsidies. These costs shall be paid for by FOSUVI up to a maximum of one percent of the sums invested annually ..." The payments for commissions were €32.3 million, corresponding to 1% of the total transfers. Adding commissions and technical support costs to total transfers, gives a total Family Housing Voucher cost of €3.293 billion, implying a unit cost of €1,3 million per Bond.

6.132 It is important to point out that the Central Pacific Region had the fewest BFV transfers, a total of 108 vouchers; and is also the region with the lowest unit cost (€1.2 million). On the other hand, the Central Region accounted for the highest number of vouchers (1,241 bonds) and its unit cost of €1.36 million was highest of all the regions. This information suggests possible problems in territorial equity in the vouchers distribution mechanism, or highly differentiated access depending on the geographical location of potential beneficiaries.

The following table shows the distribution of housing vouchers by region and year.

**Table 6.24. Distribution of Housing Vouchers by Province and Year, 1987-2001**

Region	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total	% Share
San Jose	23	1,728	4,037	5,783	5,611	5,342	3,903	2,474	3,289	4,368	4,960	2,208	1,444	3,132	2,118	50,420	26.56
Alajuela	5	2,058	2,774	2,406	2,384	2,212	3,292	2,306	4,102	4,071	4,615	1,814	1,801	3,595	3,107	40,542	21.36
Cartago	14	1,155	1,697	2,522	2,356	2,299	2,514	1,679	3,110	3,152	2,708	1,183	611	1,588	1,618	28,205	14.86
Guanacaste	48	1,237	1,903	1,923	1,583	1,866	1,565	643	2,482	2,100	3,090	1,355	834	2,470	1,633	24,732	13.03
Puntarenas	0	443	1,119	1,012	1,223	1,073	2,037	1,285	1,311	1,526	1,394	1,466	619	1,596	1,627	17,731	9.34
Limon	0	443	453	538	712	1,239	1,681	647	901	1,402	1,876	1,661	1,057	1,026	995	14,631	7.71
Heredia	1	537	1,438	1,270	1,140	1,207	1,853	384	513	804	1,552	965	236	930	759	13,569	7.15
Total	91	7,601	13,421	15,454	15,008	15,238	16,845	9,398	15,708	17,423	20,195	10,652	6,602	14,337	11,857	189,830	100.0

Source: Ministry of Housing

If we analyze the distribution by region, it becomes clear that rural areas have received a disproportionate share of the vouchers, with nearly two thirds of all vouchers distributed to rural areas.

**Table 6.25 Distribution of Housing Vouchers per Year and by Urban/Rural**

Area	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total	% share
Rural	82	4,648	7,663	8,779	7,413	9,453	10,672	5,980	10,643	12,007	14,250	7,571	4,409	10,342	8,879	122,791	64.7
Urban	9	2,953	5,758	6,675	7,595	5,785	6,173	3,418	5,065	5,416	5,945	3,081	2,193	3,995	2,978	67,039	35.3
Total	91	7,601	13,421	15,454	15,008	15,238	16,845	9,398	15,708	17,423	20,195	10,652	6,602	14,337	11,857	189,830	100.0

Source: Ministry of Housing

6.133 According to the Information System on Beneficiaries (SISBEN), in 1996 there was a housing deficit of 87,782 homes, considering only poor families. If we apply a growth rate of 1.8 percent, based on the average increase in the number of low cost homes reported by the Home and Multiple Purposes Survey, and subtract the number of BFV grants from 1997 through the first trimester of 2000, the current shortage would be 54,000 homes.<sup>80</sup>

6.134 On the other hand, the household survey data shows that in total, including poor families and those above the poverty line, the housing deficit in 1994 was 155,659 houses, of which 48,654 are in urban areas and 107,005 in rural areas. Applying the same growth rate as in the previous exercise and subtracting the number of BFV grants from 1995 through the first trimester of 2000, the housing deficit would increase to 100,000 houses.

6.135 There are many problems that require solutions in the housing sector. The main issues facing policymakers include the need to: (i) allocate more resources to improving and maintaining existing housing; (ii) improve the efficiency of the mortgage market to improve access to credit for middle-class families, relieving pressure on the voucher program and improving targeting; (iii) improve targeting of the housing voucher scheme and guarantee access to the BFV program for a greater percentage of low-income individuals. In terms of targeting, future policy changes should consider per capita income, rather than total family income, and targets should be set to ensure equitable distribution of vouchers across provinces and between urban and rural areas.

<sup>80</sup> This supposes that all the vouchers were granted to families in poverty. However, Table 6.23 shows that an important part of the resources still go to higher-income groups, so it is possible that the housing deficit for the poorest groups may be underestimated by over 50%.

## Social assistance programs in the nutrition sector

6.136 Costa Rica has made significant progress in reducing malnutrition and continues to allocate substantial resources to programs aimed at improving the nutritional status of its infant population. These outcomes are in many ways the result of government efforts in prevention, and support and rehabilitation for malnourished children. Annual investments in the two main nutrition programs averaged \$39 million over the last decade, equivalent to 0.3 percent of GDP, 1.5 percent of public expenditures and 2.5 percent of total social expenditures. In terms of value for money, however, results are less favorable. The principal problem with the nutrition programs is their limited or total lack of targeting of the poorest groups. Use of information systems that contain data on the target population could result in more efficient actions to ameliorate nutrition problems.

**Table 6.26. Costa Rica: Infant Nutrition Indicators, 1979, 1985 and 1996**

Indicator	1979	1985	1996
Live births with low birthweight (%) <sup>1</sup>	6.4	6.6	7.3
Malnutrition of children under 6 (%) <sup>2</sup>			
Severe malnutrition	0.5	0.3	0.4
Moderate malnutrition	8.5	6.0	4.7
Mild malnutrition	36.8	24.6	17.3
Overweight	11.3	2.5	4.2
School Children with stunting (%) <sup>3</sup>	20.4	11.3	7.4

1/ Live births, birthweight less than 2500 grams attended by the CCSS.

2/ According to national nutrition surveys

3/ First grade school children according to national growth census.

Source: MIDEPLAN, Indicators System on Sustainable Development, 1998.

### *Overview of the Nutritional Status*

6.137 The nutritional status of children in Costa Rica has improved dramatically over the past two decades. Table 6.26 shows trends in nutritional status indicators over the last two decades. Between 1979 and 1996, for example, the number of stunted children fell by nearly a third, from more than 20 percent to just over 7 percent. The

percentage of children with severe malnutrition decreased from 0.5 to 0.4 percent. The proportion of children born underweight remained around 6-7%. This reflects mothers' nourishment and health problems during pregnancy, and has a negative effect on infant survival and development. The highest point was reached in 1996 (7.3%), a year characterized by a strong economic recession. In 1999, this indicator fell back to 6.3% (UCR/UNICEF/FLACSO, 2000) similar to levels in high income countries such as the United States, Canada and Japan, among others (PNUD, 2000).

6.138 National nutrition surveys show a reduced prevalence of severe undernourishment in children under the age of six (less than one half of one percent) and reductions in the prevalence of moderate and mild undernourishment. Moderate undernourishment went from 8.5 % in 1979 to 4.7% in 1996 and mild undernourishment from 36.8% to 17.3 over the same period. In international comparisons, the latest available estimates of the proportion of malnourished children under the age of five put Costa Rica better than the regional average of 8%, with incidence of 5% and prevalence of less than half of the average for other similar per capita income countries, 14% (WB; 2000).

6.139 *The Nutrition Programs.* There are two main programs: *Nutrition and Child Development*, managed by the Ministry of Health and the *School Child and Adolescent Nourishment and Nutrition Program*, managed by the Ministry of Public Education.<sup>81</sup>

<sup>81</sup> The Costa Rican Research and Nutrition and Health Teaching Institute (INCIENSA) under the Ministry of Health addresses the topic of nutrition, among other areas. Although it has a clinic for the recovery of chronically

6.140 The Nutrition and Child Development Program is implemented through the Infant Care Centers (CAI). These are maternal-infant care centers that provide nutrition education, integrated care, nutrition supervision and supplementary feeding. Supplementary feeding includes meals, provision of milk and milk substitutes and distribution of food to families. The meals program offers children daily breakfast, lunch and snacks that supply 70% of their caloric needs. Pregnant and breast-feeding mothers receive a nutritional supplement equivalent to 30% of their nutritional requirements. These meals are offered together with part-time care and nutrition education in the Education and Nutrition Centers (CEN); these programs may also include care for school children in the Education and Nutrition and School Food Centers (CENCE) or can incorporate integrated full-day child care in the Infant Integral Attention Centers (CINAI).<sup>82</sup>

**Table 6.27. Costa Rica: Nutrition and Child Development Program infrastructure and beneficiaries, 1990-2000**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Establishments</b>											
Totals <sup>1</sup>	503	507	568	554	561	568	588	570	590	625	622
Index	100.0	100.8	112.9	110.1	111.5	112.9	116.9	113.3	117.3	124.3	123.7
Annual variation		0.8	12.0	-2.5	1.3	1.2	3.5	-3.1	3.5	5.9	-0.5
CEN	403	n.a.	524	513	449	452	467	457	458	487	464
CINAI	35	n.a.	44	41	51	54	55	56	55	53	53
CENCE	65	n.a.	a	a	61	62	66	57	55	52	52
CEN SIN C.S. <sup>2</sup>	0	0	0	0	0	0	0	0	22	53	53
PSR <sup>3</sup>	0	0	0	0	0	198	214	202	186	124	124
<b>Beneficiaries</b>											
Totals	72,387	60,254	68,230	76,163	86,958	121,094	99,284	84,632	76,669	107,647	97,140
Index	100.0	83.2	94.3	105.2	120.1	167.3	137.2	116.9	105.9	148.7	134.2
Annual variation		-16.8	13.2	11.6	14.2	39.3	-18.0	-14.8	-9.4	40.4	-9.8
Meals Served	24,110	25,168	26,858	25,763	26,449	30,713	28,991	27,858	26,849	26,804	27,364
Whole milk	44,919	33,036	39,552	47,830	57,517	84,758	64,122	52,878	43,501	75,140	64,276
Food Packages	3,358	2,050	1,820	2,570	2,992	5,623	6,171	3,896	6,319	5,703	5,500
Integrated Care	n.a.	n.a.	n.a.	n.a.	10,142	10,312	10,493	10,371	10,642	11,054	12,125

n.a.: Information not available.

a: Included in the CEN.

1/ Excludes PSR.

2/ CEN if served meals service

3/ Rural Health Posts that only distribute milk.

Source: Ministry of Health, Nutrition and Integrated Care department.

6.141 Whole milk is supplied on a monthly basis to undernourished or at risk children and to pregnant or breast-feeding low-income mothers. There is also nutritional follow-up, together with primary care. This care does not imply, but does exclude, daily care or more integrated care. Milk is delivered to the CAI as well as to rural health posts. By July 2000, 64 thousand people were receiving this service, 88% of whom were children aged 6 months to six years, the rest being mothers. The latest form of supplementary

undernourished patients, its role is mainly basic research. There are also day care centers (care centers and community homes) under IMAS administration. These two programs were not included in this analysis of nutrition because of their minimal population coverage (less than 2 thousand children) and lack of focus on nutrition.

<sup>82</sup> This program is popularly known as CEN-CINAI.

nourishment consists of distribution of high caloric value food packages to families with children under six years of age with moderate or severe malnutrition. Known as DAF (food distribution to families), this is a very focused program that covered 5,500 people in almost 2 thousand families in July 2000.

6.142 Table 6.27 shows trends in the infrastructure and program beneficiaries. The available infrastructure comprises over 600 CAI, 24% more than at the beginning of the decade. The number of supplementary food beneficiaries increased 34 percent, principally through the least costly form of assistance (delivery of milk and food) but did not show a uniform behavior or trend during the decade. Assistance in the form of meals served, as well as integrated care, showed a more moderate trend, and became a relatively smaller part of the program.

6.143 The School Child and Adolescent Nourishment and Nutrition Program aims to provide nourishment, nutrition education and agricultural services, and nutritional supervision to public education

**Table 6.28. Costa Rica: Infrastructure and beneficiaries of the School Child and Adolescent Nourishment and Nutrition Program, 1990-2000**

Year	School Food Centers		Beneficiaries			
	Total	Openings	Total	Index	% Change	By CE
1990	3,095	95	450,639	100.0		146
1991	3,190	95	453,462	100.6	0.6	142
1992	3,247	57	459,341	101.9	1.3	141
1993	3,313	66	466,776	103.6	1.6	141
1994	3,338	25	477,776	106.0	2.4	143
1995	3,414	76	496,392	110.2	3.9	145
1996	3,472	58	500,516	111.1	0.8	144
1997	3,576	104	494,539	109.7	-1.2	138
1998	3,647	71	479,205	106.3	-3.1	131
1999	3,681	34	468,610	104.0	-2.2	127
2000	3,718	37	471,139	104.5	0.5	127

Note: The 2000 data refer to the first semester.

Source: Ministry of Public Education, School Child and Adolescent Food and Nutrition Division.

students. The program's main service is School Lunches (CE), even though it also advises on nutrition, provides food for student lunches and supports the development of school vegetable gardens. The school lunches program offers a snack, breakfast or lunch, depending on the priority assigned to the center, to children between the ages of 6 and 17. The food centers extend coverage to pre-school children in places where the CEN-CINAI or CAI do not function, together with nutrition education on balanced and nutritional diets and hygienic handling and preparation of food, among other topics.

6.144 Close to 90% of the beneficiaries are concentrated in primary education, where the program is generalized. MEP reports indicate that during the first semester of the year 2000, there were CE programs operating in 3,718 teaching institutions attended by an estimated population of 471,000 students. Contrary to the CAI, the CE programs only operate on school days, no more than 200 days per year. Some centers in the poorest zones are an exception and have run their CE programs during school vacations and on Saturdays. The information in Table 6.27 indicates a sustained increase in the number of school lunches. Interestingly enough, the number of beneficiaries did not increase after 1996, and, in fact, decreased in the last three years of the decade.<sup>83</sup>

<sup>83</sup> This may simply reflect the poor quality of program information.

**Table 6.29. Costa Rica: Coverage of the nutrition program by age groups**

Program	Population under 18 years old by age groups				
	Total	From 0 to 4	From 5 to 6	From 7 to 12	Fr. 13 to 17
Total Pop. (thousands)	1,164	305	130	417	310
Percentage	100.0	100.0	100.0	100.0	100.0
Do not attend	69.3	87.7	68.1	39.6	91.8
Attend	30.7	12.3	31.9	60.4	8.2
School Food Center	26.6	0.7	25.1	59.8	8.0
Infant Center	4.1	11.6	6.8	0.6	0.2

Source: JD TREJOS based on the National Statistics and Census Institute's Homes Survey.

### *Coverage*

6.145 Determining the effective coverage of the nutrition programs is complex. Even though the CAI program has relatively good information on the number of beneficiaries served, it does not have precise estimates of the target population or of the population with nutrition problems. The CE program, on the other hand, is better able to determine the size of its target population, but information on the beneficiary population is not very reliable because this information is collected upon initial enrollment at the centers and information on actual beneficiaries by age or educational level is not updated over time.

6.146 An estimate of the 1999 coverage is shown in Table 6.29, obtained from the Household Survey.<sup>84</sup> It shows a general coverage of 30% of the population under the age of 18, of which 89% is attributable to the CE. Coverage reaches a maximum of 60% among the school age population. Given the high enrollment rates in public primary education in this age group, this suggests that a significant proportion of students do not attend the school food centers. The 1999 survey does not indicate the number of students who attend private centers. The survey carried out by the Ministry of Planning in 1992 (ENISO, 1992) found that only 57% of public primary school students took advantage of school lunches that year, suggesting the presence of strong self-selection. If this is the case, the data on beneficiaries obtained from enrollment data would be an underestimate. The CE coverage among adolescents is very limited, because of the selectiveness of the program in high schools as well as low enrollment at high school level.

6.147 The CAI coverage is approximately 10% of the population under the age of seven. Despite the limitations of the survey mentioned, coverage of the infant population can be estimated by combining the information collected with an estimate of the total infant population. These estimates indicate that less than 20 percent of children under the age of seven are covered. Combining the survey information with the number of annual births in the country yields an estimated coverage of pregnant or breast-feeding mothers of nearly 7 percent. This low coverage of pregnant and breast-feeding mothers implies even lower coverage of poor mothers, since poor families are over represented in total births; the poorest 20 percent of the population account for at least 25% of all births.

<sup>84</sup> An additional problem must be added: programs with low population coverage face greater sampling errors, which seems to be the case of the CAI, made even worse by their marked geographic territorial concentration.

## ***Resource Allocation***

6.148 Financing for the CAI comes from FODESAF, a tax on imports and the ordinary budgetary resources of the Ministry of Health. The Health Ministry finances the Nutrition and Integrated Care Department, which coordinates the program, while the first two sources finance the program's operations. Each source is administrated by a different entity making it difficult to clearly define the program's total real expenditure.<sup>85</sup> This difficulty in defining total expenditure is compounded by the presence of expenditures on other programs, such as the primary care program (MIDEPLAN/MS, 1991) and by the strong budgetary under-spending that characterizes the program.

6.149 The CE programs are financed by resources allocated by FODESAF, and MEP covers the ordinary budgetary resources of the School Child and Adolescent Nourishment and Nutrition Division, the administrator of the program. The FODESAF resources are partially administered by OCIE (International Cooperation Office for Education) since the salaries of the program's cooks are paid directly by the Ministry of Finance through the payroll, bypassing FODESAF and MEP budgets.

6.150 For both programs, the infrastructure works financed by FODESAF or by the national budget are handled by the Ministry of Public Works and Transportation. Both programs have other contributions or expenditures that are not quantified. For example, benefit from contributions to communities granted through parents' committees. The CAI and the CE benefit from the services of regional directors, health officials and the EBAIS while the CE also benefit from the work of the education centers' principals and the supervision of regional inspectors. The internal administration budgets and those of FODESAF also contribute to both programs.

6.151 Within these limitations, Table 6.30 shows trends in the programs' effective expenditure concentrating on their operation and considering their principal financing sources, which are FODESAF and specific taxes. The ordinary budget is not included. The information suggests very different trajectories. While the CE programs were strengthened by a 34% increase in total expenditure during the nineties (28% per beneficiary), the CI programs lost more than half of their real resources per beneficiary. So although more was spent in the CI programs in 1990, now the opposite is true. Though the CI reduction may be overestimated due to the presence in 1990 of an extraordinary contribution (food bond), this is compensated by the fact that it is considered effective expenditure and there has been large and persistent under-spending of the CI budget.

## ***Efficiency***

6.152 The absence of reliable and timely information on the programs and the gap between expenditure information and data on beneficiaries, suggests resource management problems. It is not unusual to find different data for the same year in different documents produced by the program administrators; or to not find data on beneficiaries for specific years. In addition, information on costs per beneficiary, per benefit type and administrative activities is virtually nonexistent.<sup>86</sup> This situation indicates an absence of a managerial information system to manage the program efficiently.

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<sup>85</sup> The FODESAF resources are handled through the OCIS (International Health Cooperation Office), the specific tax resources by the CTAMS (Technical Medical-Social Attention Council) and the ordinary ones through the Ministry's budget office.

<sup>86</sup> In the case of the CE, there is a clear difference between what the FODESAF claims to have spent and the expenditure reported by DANEA. DANEA reported almost 40% less expenditure on salaries over the last four years. The discrepancies are smaller for food, where DANEA reported 30% less than FODESAF in 1997.

6.153 A criticism of these programs is that salary payments become fixed costs and food expenditures are variable costs and hence vulnerable to budget changes. Budget reductions cause reductions in quality. This happened to the CE during the eighties, when the first economic crisis shrank the available resources to the point that nearly all the nutritional supplement was lost and salaries reached 60 percent of total expenditures. (Trejos, 1992a; BM, 1990). Table 6.31 offers information on some efficiency aspects and the composition of expenditures.

**Table 6.30. Costa Rica: Evolution of the resources assigned to the Nutrition Programs, 1990-1999**

Program	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>School Food Centers</b>										
Total Expenditure <sup>1</sup>	16.9	14.4	12.8	14.6	18.0	16.9	18.7	20.5	20.6	22.6
Index	100.0	84.9	75.8	86.1	106.6	99.7	110.4	121.0	121.7	133.5
Variation %		-15.1	-10.8	13.6	23.7	-6.4	10.7	9.5	0.6	9.7
Expen. per beneficiary <sup>2</sup>	37.5	31.7	27.9	31.2	37.7	34.0	37.3	41.4	42.9	48.2
Index	100.0	84.4	74.4	83.2	100.5	90.5	99.4	110.2	114.5	128.4
Variación %		-15.6	-11.9	11.8	20.9	-9.9	9.8	10.9	3.8	12.2
<b>Centros Infantiles</b>										
Total Expenditure <sup>1</sup>	28.5	19.9	18.7	22.3	21.9	23.5	20.1	19.6	21.0	19.3
Index	100.0	69.8	65.6	78.2	76.8	82.3	70.4	68.7	73.6	67.8
Variación %		-30.2	-6.0	19.3	-1.8	7.2	-14.5	-2.4	7.0	-7.8
Expen. per beneficiary <sup>2</sup>	380.2	343.9	274.0	292.8	251.8	193.9	199.5	231.6	273.6	179.7
Index	100.0	90.5	72.1	77.0	66.2	51.0	52.5	60.9	72.0	47.3
Variación %		-9.5	-20.3	6.9	-14.0	-23.0	2.9	16.1	18.2	-34.3

1/ In millions of 1999 U.S. dollars, according to payment balance average exchange rate.

2/ In 1999 U.S. dollars, according to payment balance average exchange rate.

Source: JD TREJOS based on FODESAF, MS, MEP, INEC, STAP and BCCR information.

6.154 The data show satisfactory trends for the CE programs. Their expenditures on salaries to staff cooks decreased from 51 percent in 1990 to only 18 percent nine years later. This decrease occurred because total CE expenditure grew 34 percent while food expenditure more than doubled. A freeze on the hiring of new cooks since the end of the eighties, more use of cooks supplied by communities, and a new strategy in which complete services including preparation were contract, made this possible. Management also improved. Other improvements in the mid-nineties included electronic transfer of funds to education centers, and allowing funds to be managed by the center's administration committee (school principal plus parents' representatives), although delays in fund transfer are still a yearly problem, especially during the first months of the school year.

6.155 In the case of the CAI, which are more salary-intensive programs, salaries represent close to half of total expenditures and their relative weight increased in the last two years. The program has seen a large reduction in its real resources and an increase in the population covered. Resources available for food dropped by 67% over the last nine years, and overall resources dropped by 32%. There was an even more pronounced 77% fall in beneficiary numbers. Despite a change in the basic "food basket" which may have reduced its cost, the real reduction is so large that it suggests a deterioration in the quality of the assistance provided, perhaps due to operational and efficiency problems.

6.156 The situation becomes even clearer when consideration is given to the fact that this program has been under-spending its budget. Since 1992, the program has spent 30% less than the resources budgeted by FODESAF, and 16% less than the amount actually provided. During the last five years, the figures are

even greater (36% and 21% respectively), and reached a peak in 1997, when only 48% of the allocated budget and 60% of the amount actually paid were spent. Even though this program faces restrictions on hiring personnel, even to replace those who leave to work in pre-schools, the large fall in spending on food cannot be explained.<sup>87</sup> In any case, the difficulties in hiring personnel could be addressed by subcontracting CAI services, as is done in other public health establishments. A more serious problem this program faces is its loss of priority within the Ministry of Health in the context of the sector reform. The appropriate institutional location of the CAI is a problem that has yet to be solved.

### *Effectiveness*

6.157 Evaluating the efficacy of the nutritional programs is almost impossible without periodic data on the nutritional status of beneficiaries and without a precise measure of the nutritional contribution delivered by the program. Even with this information, it is difficult to determine the program's real impact. There have been cases of supplementary feeding programs where the nutritional status of the child has worsened, because his daily ration at home was reduced under the (mistaken) assumption that the program would more than compensate.

6.158 The drastic reduction in food expenditure per CAI beneficiary suggests a possible loss of efficacy in the program among the population under the age of six. However, since this program is linked to

**Table 6.31. Costa Rica: Composition of Nutrition Programs expenditures, 1990-1999**

Year	School Food Centers				Infant Centers			
	Total	Salaries	Food	Other 1	Total	Salaries	Food	Other 1
1990	100.0	51.0	39.8	9.3	100.0	40.4	47.2	12.4
1991	100.0	40.4	52.7	6.9	100.0	51.3	31.4	17.2
1992	100.0	27.6	65.2	7.1	100.0	49.2	38.0	12.9
1993	100.0	26.2	69.3	4.5	100.0	43.6	43.4	13.0
1994	100.0	25.8	63.0	11.2	100.0	48.6	37.7	13.7
1995	100.0	21.5	75.6	3.0	100.0	48.5	37.6	13.9
1996	100.0	19.5	79.1	1.3	100.0	50.9	38.0	11.1
1997	100.0	15.5	82.4	2.1	100.0	48.7	36.2	15.0
1998	100.0	17.9	80.0	2.0	100.0	56.4	33.9	9.7
1999	100.0	18.1	81.0	0.9	100.0	65.5	23.1	11.4

<sup>1/</sup> Includes other ordinary expenditures and capital expenditures.

Source: JDTREJOS based on FODESAF, MS, MEP, INEC, STAP and BCCR information.

primary healthcare services where cases of malnutrition are identified and referred, and because these cases receive priority care, it is difficult to reach a definitive conclusion on this issue. The primary healthcare program has been strengthened since 1994, so it is possible that the efficacy of the program has not deteriorated and continues to have a high capacity to reach children at nutritional risk (Pfeffermann and Griffin, 1989). The program also makes a positive contribution in its control over the type of food provided to the children.

<sup>87</sup> The expansion of pre-school coverage has caused a migration of CAI personnel toward schools where salaries and shifts are better.

## Equity

6.159 Despite the fact that the social assistance programs are principally financed by FODESAF, which was created to protect exclusively the country's poor, none of the programs are exclusively targeted to poor groups. Although the CAI give priority to malnourished and poor children, they also provide support for children at social risk who do not have access to daycare while their mothers work. Given the pattern of women's workforce participation, this assistance primarily benefits middle class mothers employed in the public sector. The CE were launched in 1975 as a universal program, at least among primary schools, so it is necessary to evaluate its access equity with caution. Table 6.33 shows the distribution of beneficiaries of both programs by income level. These income levels were defined by ranking families based on per capita family income.

**Table 6.32. Costa Rica: Estimated caloric contribution of the School Lunch ration per child, 1989-1999**

Indicator	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Daily quota by priority (ordinary colones)</b>											
Priority I	6.0	8.0	15.0	17.0	23.5	75.0	75.0	80.0	80.0	80.0	90.0
Priority II	4.0	6.0	9.6	12.5	14.1	56.0	56.0	60.0	60.0	60.0	80.0
Priority III	2.0	4.0	6.5	9.3		37.5	37.5	40.0	40.0	40.0	60.0
Priority IV						15.0	15.0	25.0	25.0	25.0	40.0
<b>Daily quota by priority (1999 colones)</b>											
Priority I	28.1	31.5	45.9	42.7	53.7	151.1	122.6	111.3	98.3	88.0	90.0
Priority II	18.7	23.6	29.4	31.4	32.2	112.8	91.6	83.5	73.7	66.0	80.0
Priority III	9.4	15.7	19.9	23.3	0.0	75.5	61.3	55.7	49.2	44.0	60.0
Priority IV	0.0	0.0	0.0	0.0	0.0	30.2	24.5	34.8	30.7	27.5	40.0
<b>Daily quota by priority (Index 1994 = 100)</b>											
Priority I	18.6	20.8	30.4	28.3	35.6	100.0	81.2	73.7	65.1	58.3	59.6
Priority II	16.6	20.9	26.0	27.8	28.8	100.0	81.2	74.0	65.4	58.5	70.9
Priority III	12.4	20.8	26.3	30.9	0.0	100.0	81.2	73.7	65.1	58.3	79.4
Priority IV	0.0	0.0	0.0	0.0	0.0	100.0	81.2	115.1	101.7	91.0	132.4
<b>Daily quota by priority (Annual % change)</b>											
Priority I		12.0	45.7	-6.9	25.9	181.1	-18.8	-9.2	-11.7	-10.4	2.2
Priority II		26.0	24.3	6.9	2.7	249.8	-18.8	-8.8	-11.7	-10.4	21.2
Priority III		68.0	26.3	17.5	-100.0		-18.8	-9.2	-11.7	-10.4	36.3
Priority IV							-18.8	41.8	-11.7	-10.4	45.4
<b>Percentage of daily required calories provided</b> <sup>1</sup>											
Priority I	10.8	12.3	18.0	16.7	20.9	58.2	48.4	45.1	38.6	32.7	34.4
Priority II	7.2	9.2	11.5	12.2	12.5	43.4	36.1	33.8	29.0	24.5	30.6
Priority III	3.6	6.1	7.8	9.1	0.0	29.1	24.2	22.6	19.3	16.3	22.9
Priority IV	0.0	0.0	0.0	0.0	0.0	11.6	9.7	14.1	12.1	10.2	15.3

<sup>1/</sup> According to cost per calorie of the basic food basket and a requirement of 1870 kilocalories.

Source: JDTREJOS based on FODESAF, MS, MEP, INEC, STAP and BCCR information.

**Table 6.33. Costa Rica: Distribution of Nutrition Program Beneficiaries by Income Level, 1992 and 1999**

Income Stratum <sup>1</sup>	Infant Centers		School Food Centers	
	1992	1999	1992	1999
Total	100.0	100.0	100.0	100.0
Per Quintile				
poorest 20%	53.2	55.9	39.2	36.3
following 20%	20.2	27.1	25.6	29.0
following 20%	18.2	11.0	17.6	18.2
following 20%	3.2	4.1	12.1	11.4
richest 20%	5.2	1.9	5.5	5.1
Poorest groups				
poorest 10%	31.4	30.7	19.6	18.3
poorest 20%	53.2	55.9	39.2	36.3
poorest 30%	62.5	73.6	53.1	51.5
poorest 40%	73.4	83.0	64.8	65.3

<sup>1/</sup> Families ordered by per capita income.

Source: JDTREJOS based on the Social Investment survey (ENISO, 1992) and the INEC Homes Survey (EHPM, 1999).

new priorities were established, continuing the geographic focus, but introducing additional information and criteria. Four priorities were defined. The highest priority is given to schools in poor urban neighborhoods, identified by the MEP advisors. Rural one-teacher schools are the second priority. Third priority is assigned to centers in districts with lower social development according to the MIDEPLAN indicator, and the lowest priority is given to centers in districts with higher social development and high schools.

6.160 When these priorities were established, the quota for the first two was doubled; over time, however, their budgets have not been adjusted for inflation and the difference has been eroded. Only schools of the fourth priority have managed to increase the real value of their quota. Table 6.32 presents changes in the quotas since 1989 and estimates the percentage of nutritional requirements they meet. The schools in priority I increased from a contribution of 11% of daily caloric intake in 1989 to 58% in 1994 and then dropped to 34% in 1999. The lowest priority schools went from a 12% contribution in 1994 to 15% in 1999. The programs do not operate every day, and when the food expenditure is averaged over all 365 days of the year, the estimated daily caloric contribution went from 5% in 1990 to 12% in 1999. It is clear that even with the increased allocation of resources in the last decade, the universal character of the service prevents it from having a significant impact on general nutrition. Although it may be having an educational impact by attracting and retaining students in public education, the program would have more efficacy if it were targeted.

6.161

6.162 The data show that the CAI are better targeted to the poor than the CE, where only a little over a third of the beneficiaries belong to the lowest ten percent (extreme poverty). In the CAI only 6 percent of benefits go to the wealthiest 40 percent of the population, in contrast to nearly 17 percent in the CE program. The table also shows some improvement in targeting, as more of the resources reach the poorest in 1999 compared with 1992.

In the CE case, the rise in the value of the daily rations suggests an increase in its efficacy with respect to nutritional contribution, although this is limited. The principal impact of the programs might be the incentive it offers for staying in the education system. A geographic focus was introduced in 1989 in which education centers were classified into three priorities depending on the degree of the district's (smallest administrative unit) social development and an index established by MIDEPLAN (1987), in response to the real reduction of resources for food. The highest priority centers were assigned a higher daily quota of food per student. The priority classification remained in place until the beginning of 1994, when

6.163 When considering equity in the CEN-CINAI program (for infant care) it is observed that only 24% of beneficiary children belong to families in the poorest income quintile (Table 6.34). Nearly two out of every three beneficiaries belong to the poorest 40% of the population. This shows a clear potential to improve targeting.

6.164 These results do not take into account the different value of the benefits that are received by each beneficiary. For example, the highest priority students not only get a daily subsidy that is double that of students in non-priority centers, but they also receive the benefit on more days. This suggests that even if the distribution of beneficiaries has not changed in the nineties, it is probable that targeting has improved.

6.165 The concentration of beneficiaries in the poorest groups indicates that the nutrition programs face inclusion errors. They benefit people other than the poorest groups. However, this does not automatically imply that the programs do not also suffer important exclusion errors (excluding people in the poorest groups who qualify for the program). Since the programs were not designed to benefit only the poorest groups, Table 6.35 provides an estimate of the type I and type II errors for different definitions of the target population.

**Table 6.34. Cumulative distribution of the CEN-CINAI program beneficiaries by income quintile, 1999 (%)**

Quintil	CEN-CINAI			TOTAL
	Infant Care	Milk	Food Rations	
1	24	61	37	56
2	58	85	69	81
3	79	95	89	93
4	96	98	93	98
5	100	100	100	100

Source: Solidarity Plan, based on the 1999 Multiple Purpose Household Survey.

6.166 The target population for the CAI program has been limited to children under the age of seven, though the 2 to 6 year age group should be considered to avoid overestimating non-coverage. The data confirm that for the CAI program the problem is coverage rather than infiltration. Close to 80% of the potential target population is excluded from the program. Infiltration is minimal (inclusion errors), and so narrower focus is not the issue. On the other hand, the CE show less problems with respect to coverage with only 30% of the potential target population of children aged 7 to 12 excluded. Despite some inclusion errors, the CE programs are better focused. Modifying the program's definition would make it possible to provide assistance to the whole target population with the current benefits. However, solving the primary education coverage problem is a necessary condition for reaching this goal.

**Table 6.35. Costa Rica: Inclusion and exclusion errors of the Nutrition Program, 1990**

Program and Stratum	Target Pop. <sup>1</sup> (thousands)	Relative Distribution		
		Attend <sup>2</sup>	Don't Attend <sup>3</sup>	Infiltrated <sup>4</sup>
<b>Infant Centers</b>				
Poorest 20%	123.1	20.0	80.0	16.0
Poorest 30%	175.5	18.6	81.4	6.7
Poorest 40%	222.9	16.4	83.6	3.5
<b>School Food Centers</b>				
Poorest 20%	128.9	70.0	30.0	123.5
Poorest 30%	185.7	68.6	31.4	65.7
Poorest 40%	237.0	68.1	31.9	37.2

## Summary of Issues and Recommendations for Social Protection Programs

6.167 The previous sections have highlighted two main problems related to social protection programs. First, there are wide gaps in coverage. A large number of poor children under 5 years of age are at high risk of poor development, mainly due to the lack of integrated interventions in early childhood. In addition, a large number of poor elderly (estimated at over 20,000 in 1999) are not covered by non-contributory pensions. Many of these problems are related to a high infiltration rate in the system,<sup>88</sup> where benefits are received by people who do not need them, rather than to a lack of resources. Second, there is no coordination among programs, which diminishes their potential impact. The lack of coordination also increases administrative costs and creates problems in targeting social expenditures. Many of the benefits directed to the poor are reaching the general population or are captured by middle income groups.

6.168 In order to address these problems, efforts should focus on two strategies: (i) filling the critical gaps in service coverage for poor children under 5 years of age, as well as for elderly people who are not covered by non-contributory pensions; and (ii) improving the way the programs' social protection is provided, in order to improve coordination, focus and efficiency.

6.169 *Coverage and Focus of ECD programs for children less than 5 years of age.* The 8.6% coverage of ECD programs in Costa Rica is low for the country's level of development and high social expenditure (Table 6.36). According to data obtained from SIPO, 84,500 poor children between 0 and 5 years of age are not covered by any type of ECD program. There are three principal programs for this age group financed by FODESAF. The first is the CEN-CINAI program, operated by the Ministry of Health, that currently covers approximately 18,200 children aged 2 to 5, providing them with integrated health care, nutrition, early stimulation and pre-school education services. The CEN-CINAI program also supplies powdered milk and food rations to poor mothers and their families (close to 14,000 mothers and 97,000 children). The second is the Community Homes program operated by IMAS, that provides community-based infant care services to a population of approximately 6,600 poor children. The program uses infant care models common in other Latin American and Caribbean countries, providing nutrition and infant care services to children living in poor neighborhoods using trained community mothers; qualified families receive a monthly subsidy from IMAS to pay the community mothers, who are not on the government payroll. The third is a MEP program that covers approximately 11,000 children. Additionally, there are some private institutions that administer programs with public funds and which covered 8,700 children in 2001.

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<sup>88</sup> Infiltration occurs when a person who is not poor receives pension benefits. This has happened basically due to the lack of verification of entitlement and because the most vulnerable groups often lack proper identification. This problem may diminish when the SIPO is implemented correctly.

**Table 6.36. Coverage of ECD programs in Costa Rica, 2000-01**

<b>ECD Programs</b>	<b>2000</b>	<b>2001-End of June</b>	<b>2000-End of September</b>
Estimated Population 0-5 years old	506,000	517,126	520,423
<b>Public Programs</b>	<b>19,054</b>	<b>28,786</b>	<b>35,878</b>
CEN-CINAI	13,831	13,213	18,200
Ministry of Education	1,140	11,100	11,100
Community Homes	4,083	4,473	6,578
Others-NGO's	8,548	8,736	8,737
<b>Total attendance</b>	<b>27,602</b>	<b>37,522</b>	<b>44,615</b>
<b>Coverage %</b>	<b>5.5%</b>	<b>7.3%</b>	<b>8.6%</b>

Source: IMAS, De la Mano Program.

6.170 In order to increase coverage significantly in the short term, the “*De la Mano*” program has been started, which will offer ECD services to the majority of poor children who are not covered, during the next five years. A committee of all the relevant public actors guides the Technical Secretariat in charge of developing the “*De la Mano*” program, drawing on successful experiences in Costa Rica and other countries, with the support of UNDP and UNICEF. The strategy for increasing the coverage of ECD services has three prongs: (a) increasing awareness of the importance of ECD services and educating families in basic ECD techniques through the strategic use of marketing and communication mass media and taking advantage of the high literacy levels of the population; (b) expanding coverage, especially for children of low income families, by better use of public resources (for example, improved focus, efficient use of installed capacity, and new and more efficient payment mechanisms), additional non-public resources (for example, cooperation with NGO's, better credit access conditions and training for community mothers who wish to establish ECD centers; and (c) establishing a comprehensive information system to facilitate focus and allow closer monitoring of the whole ECD program.

6.171 *Non-contributory pensions for the elderly poor.* Despite the high coverage of the Costa Rican social security system, a great number of elderly poor continue to lack coverage and remain in conditions of poverty or extreme poverty. The CCSS, with funds provided by FODESAF, provides a great number of non-contributory pensions to poor elderly people who are not covered by the contributory system. In practice, however, only 40-50% of these pensions actually reach persons below poverty line. According to SIPO data, approximately 50% of elderly people below the poverty line were not covered by any pensions program in the year 2000. Two of the reasons for this are that little or no information about the system reaches the poorest potential beneficiaries, and the fact that the social workers who grant CCSS pensions only verify about 60% of the applications.<sup>89</sup>

6.172 Recently, reviews of pending applications have been carried out to determine eligibility, with the support of SIPO. The purpose of this initiative is to identify potential beneficiaries who are not yet covered and send their names and applications to the CCSS. One achievement of this effort is that nearly 10,000 pensions that were erroneously assigned have been redirected to elderly people who are not covered by the social security system. IMAS must make greater efforts to update the SIPO database and continue with the process of assigning pensions to the poorest beneficiaries.

<sup>89</sup> Information contained in the document “Evaluación del Programa Régimen No Contributivo de Pensiones Por Monto Básico”, Borrador FODESAF, 2000.

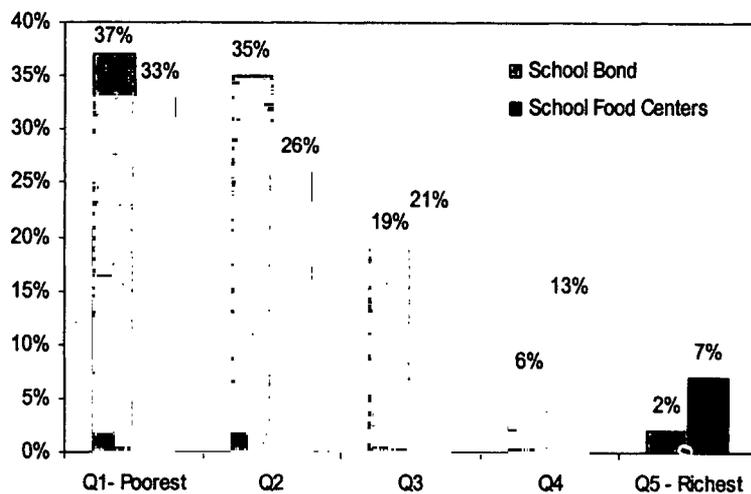
6.173 ***Institutional coordination and program efficiency.*** In contrast to many other Latin American countries, Costa Rica has a relatively small number of institutions that handle and operate the social protection programs. There are, however, several coordination problems within the programs as well as among the different institutions' programs. Furthermore, different institutions provide similar benefits or handle similar programs. For example, the IMAS administers a scholarship program, as does the Ministry of Education; the IMAS provides housing subsidies, which are also provided by the Housing Ministry, to similar target populations.

6.174 Recently the FODESAF administration has begun to investigate some of these duplications and is performing institutional and impact evaluations of its bigger programs. In addition, the IMAS administration is making efforts to restructure programs and procedures, concentrating on their design, financing and evaluation. Some program consolidations have already begun. The scholarships programs have been assigned to the National Scholarship Fund (FONABE), under the responsibility of the Ministry of Education, and all the housing subsidies will be handled and managed by the Housing Ministry. These reforms are expected to reduce administrative costs, increase subsidy coverage and improve the targeting of programs to the poor, using unified criteria for all the programs.

6.175 ***Improvement of the social programs' focus.*** As observed in Figure 6.4, as well as in each of the previous sections, there are important social protection programs where targeting needs to be improved. This is the case, for example, with the infant care program (CEN-CINAI), where only 24% of beneficiary children belong to families in the poorest income quintile. Also, only 45 to 50% of the non-contributory pension beneficiaries are elderly people living below the poverty line.

6.176 In general, one of the main problems with the social protection programs is that they lack a consistent focus and have multiple instruments of social aid that are not well coordinated. This leads to duplication, waste and inefficiency, and makes it impossible to create a national beneficiary registry that could help to provide oversight of beneficiaries and their benefits.

**Figure 6.4. Distribution of the School Bond and School Food Centers Receptors by income quintiles.**



Source: 1999 EHPM calculations; the universe considered in the analysis includes all the children in the age group from 5 to 17 years old, since EHPM does not provide information that would allow an analysis restricted exclusively to the student who attend public schools.

household, civil status, income levels, etc. It also includes information on coverage of the families within government social programs such as health, education, social security and others. The system is being

6.177 The SIPO database was constructed by the IMAS between 1999 and 2001 on the basis of a census of the poor areas – urban and rural – previously identified by Unsatisfied Basic Necessities (NBI) maps developed by the National Statistics and Census Institute (INEC). By mid 2001 the database contained 207,000 families, comprising 808,500 individuals. The database contains socio-economic and labor information including age, education level, relationships among the members of the

used to select beneficiaries for school bonds, the scholarship programs and housing bond program and to grant new non-contributory pensions.

6.178 *Evaluation and monitoring.* There is a lack of an effective M&E system for the social sectors and this is an impediment to ensuring value for money in social spending. Monitoring and evaluation are key to evaluate progress, evaluate the impact of programs and make more efficient decisions on programs to improve social indicators of the poor. For instance, had a good evaluation program existed in the CEN-CINAI and other child care programs, resources could have been saved by finding the most cost effective system for child care. Different modalities of child care, some including only parental education, others including center-based stimulation and early child education, for example, could have been evaluated to determine their impacts and relative costs. The practice of establishing base-lines and measuring the impact of specific programs should be implemented routinely, in order to draw lessons from experience which can be used to modify programs and improve their impact. In addition, instruments such as Living Standards and Measurement Surveys and improved household surveys provide valuable information on key target groups and on the outcomes of the main social programs, complementing the annual household surveys currently carried out by the Statistical Institute.

6.179 In 2000, the Government began efforts to monitor progress in meeting the targets set for the different social programs, and started to publish the results regularly to improve accountability of program administrators. FODESAF recently created an evaluation unit, that has barely begun the lengthy task of gathering data to identify the program costs.<sup>90</sup> In addition, the Statistics and Census Institute has analyzed some of the most important programs using the multiple purpose Household Surveys.<sup>91</sup> Support for the evaluation of these programs is being provided through a work agreement with the UNDP office in Costa Rica.<sup>92</sup> The Institute has also contracted with the local UNDP Office for evaluation of major social programs in the education sector including the school lunch program, and scholarship and voucher programs. These efforts need to be continued, along with the introduction of formal scientific evaluation of major social programs to assess their impact and cost effectiveness.

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<sup>90</sup> In order to perform this exercise FODESAF is using a Managerial Information System developed by the Pan-American Health Organization.

<sup>91</sup> There are big problems with the information obtained by surveys in Costa Rica because of the lack of an adequate sampling frame, since the last survey was performed in the mid-eighties. These problems may be solved in the short term by the INEC, by making adjusting using the results forecast by the XI population and housing census carried out in the year 2000 and whose main results were published in mid-2001.

<sup>92</sup> The programs that will be studied and evaluated are under the Ministry of Education and include the school food program, the school bond program and the scholarships program.



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## STATISTICS ANNEX: EDUCATION SECTOR

Appendix Table 4.1

Costa Rica: Gross and net scholarship rates, 1990-1999

(Relative figures)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Gross Scholarship Rates<sup>1/</sup></b>										
Pre-school (5.5 to 6.5 years old)	61.7	67.5	66.8	66.9	67.3	70.3	72.6	75.7	80.1	82.8
II and II Cycle	102.0	103.8	105.5	106.5	106.9	107.5	108.4	108.3	108.0	108.0
III and Diversified Education	50.5	52.2	54.7	55.5	56.9	58.4	57.4	59.4	60.2	61.2
<b>Net Scholarship Rates<sup>2/</sup></b>										
Pre-school (5.5 to 6.5 years old)	61.4	67.1	66.3	66.4	66.7	69.6	71.9	75.2	79.3	82.1
II and II Cycle	90.1	89.8	90.5	91.3	93.0	92.8	94.3	93.4	92.6	91.8
III and Diversified Education	39.5	41.3	42.7	43.6	45.2	46.5	46.3	47.0	47.4	49.0

1/ Initial total enrollment for each level as percentage of the reference population

2/ Initial total enrollment for each level as percentage of the reference population

Source: MEP Statistics Department's enrollment statistics and CELADE population data

(Demographic Bulletin: Latin America Population per Calendar Years and simple ages . 1995-2005, July 1997)

Appendix Table 4.2

Costa Rica: Attendance rates to the education system of the population in school age  
(percentage of the population from 7 to 12 years old attending the education system)

Indicators	Population from 7 to 12 years old		
	1990	1995	1999
Total Country	94.8	97.6	96.8
Income Stratum <sup>1</sup>			
Quartile 1	92.1	96.6	95.0
Quartile 2	95.4	97.5	97.1
Quartile 3	96.1	98.4	97.3
Quartile 4	98.1	99.7	99.1
Region			
Metropolitan Area	96.4	99.0	99.0
Central Urban Region	96.3	98.7	98.5
Central Rural Region	94.8	97.7	95.8
Chorotega Region	93.9	97.9	97.5
Central Pacific	95.7	96.5	96.5
Brunca Region	92.5	95.8	96.4
Atlantic Region	93.3	96.1	93.7
Northern Region	90.5	95.9	92.5
Zone			
Urban	96.2	98.7	98.5
Rural	93.4	96.7	95.1
Gender			
Male	94.6	97.5	96.7
Female	94.9	97.7	96.8

1/ According to family per capita income. Quartile 1 includes 25% of the families with the lowest family per capita income.

Source: JD Trejos based on the National Statistics Institute's Multipurpose Household Survey.

Appendix Table 4.3  
 Costa Rica: General education efficiency indicator

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1999
<b>Primary (I and II cycles)</b>									
% graduated without flunking	44.6	46.6	45.7	44.3	43.7	44.2	45.9	46.2	48.5
% that graduated	76.7	78.2	79.2	80.8	83.3	82.9	84.1	84.4	79.2
Efficiency Coefficiency <sup>2/</sup>	0.77	0.80	0.80	0.80	0.81	0.81	0.82	0.82	0.77
Years per student	7.75	7.53	7.52	7.49	7.43	7.41	7.32	7.31	7.74
Years per approved year	1.29	1.25	1.25	1.25	1.24	1.24	1.22	1.22	1.29
<b>High School (III and IV cycles)</b>									
% graduated without flunking	25.3	23.9	23.3	23.5	21.8	21.0	21.8	22.7	31.3
% that graduated	41.7	38.8	37.1	38.2	35.8	36.0	36.8	37.9	47.5
Efficiency Coefficiency <sup>2/</sup>	0.56	0.53	0.52	0.53	0.51	0.52	0.52	0.53	0.61
Years per student	10.56	9.86	10.12	9.83	10.15	10.06	10.02	9.90	8.59
Years per approved year	1.76	1.64	1.69	1.64	1.69	1.68	1.67	1.65	1.43

Note: The 1991 to 1997 data are not strictly comparable with the 1990 and 1999 data since the first ones do not include last year dropouts.

1/ Measured through reconstructed scholar cohorts.

2/ Optimum number of years employed (in absence of repetition and dropout) as ratio of number of years employed by the cohort.

Source: MEP Statistics Department.

**Appendix Table 4.4 A**  
**Costa Rica: Total repetitions by grade and level. 1990-1999**

<b>Year Enrolled</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>
	<i><b>Absolute Figures</b></i>									
<b>Total</b>	49139	47724	45006	39310	43263	47404	59138	53228	53042	50642
<b>I Cycle</b>	36951	35752	34561	31138	33674	35622	41561	37043	35867	34069
<b>1st</b>	17851	17751	18635	18074	18320	18551	19938	18377	17509	16546
<b>2nd</b>	10666	10090	9130	7811	9102	9541	11718	10368	10129	9672
<b>3rd</b>	8434	7911	6796	5253	6252	7530	9905	8298	8229	7851
<b>II Cycle</b>	12188	11972	10445	8172	9589	11782	17577	16185	17175	16573
<b>4th</b>	6758	6716	5952	4551	5369	6833	10219	9302	9817	9056
<b>5th</b>	4747	4600	4076	3104	3698	4530	6699	6282	6711	6756
<b>6th</b>	683	656	417	517	522	419	659	601	647	761
<b>Night Schools</b>	96	134	84	78	85	140	64	90	39	56
<b>I</b>	28	32	11	16	20	44	8	17	3	12
<b>II</b>	21	26	13	17	11	16	4	20	19	10
<b>III</b>	31	46	29	26	29	45	38	39	6	25
<b>IV</b>	16	30	31	19	25	35	14	14	11	9
<b>III Cycle and Diversif. Ed.</b>	13523	15038	13263	16339	15549	19356	20775	21521	21897	22444
<b>III Cycle</b>	10928	12030	10411	13620	13220	16031	17080	18045	18349	19295
<b>7</b>	6349	6915	5940	7470	7979	9493	10599	10942	11636	12164
<b>8</b>	3002	3391	3080	4014	3408	4306	4299	4664	4656	5109
<b>9</b>	1577	1724	1391	2136	1833	2232	2182	2439	2057	2022
<b>Diversified Ed.</b>	2595	3008	2852	2719	2329	3325	3695	3476	3548	3149
<b>10</b>	2099	2453	2275	2285	2090	2842	3044	2800	3056	2815
<b>11</b>	465	526	535	413	234	478	619	586	440	306
<b>12</b>	31	29	42	21	5	5	32	90	52	28

Appendix Table 4.4B  
 Initial enrolment in regular education  
 By: education level, cycle and year enrolled  
 Dependency: Public, private and semi-public  
 Schedule: Day and night  
 Period: 1990-1999

Level, Cycle and Year enrolled	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>I and II Cycles</i>	435205	453297	471049	484958	495879	507037	518603	525273	529637	535057
<b>I Cycle</b>	251879	260749	272621	280764	283149	283358	287451	289284	289632	288523
1st	94066	102358	106860	104848	103442	104128	107456	105314	102992	103331
2nd	81716	81944	88421	92649	92020	91422	92519	95636	94609	93372
3rd	76097	76447	77340	83267	87687	87808	87476	88334	92031	91820
<b>II Cycle</b>	183326	192548	198428	204194	212730	223679	231152	235989	240005	246534
4th	70482	72498	73286	74340	80595	85396	86329	86543	88879	91940
5th	62620	65057	67219	68658	70189	75574	78892	79981	80585	83402
6th	50224	54993	57923	61196	61946	62709	65931	69465	70541	71192
<b>Night Schools</b>	2205	2116	2181	1931	1966	1886	1792	1504	1357	1433
I	449	420	407	343	310	339	361	276	215	194
II	449	388	371	322	353	372	323	325	247	235
III	596	622	680	549	501	535	521	429	424	415
IV	711	686	723	717	802	640	587	474	471	589
<b>III Cycle and Diversif. Ed.</b>	129805	138581	150745	159508	168980	178674	182489	192678	202415	212945
<b>III Cycle</b>	94777	100618	109147	116261	123991	129969	131342	138472	147624	156021
7th	44734	46151	50528	55100	59328	62427	63222	67882	71824	73971
8th	28555	30904	32972	34782	36173	37938	37982	39866	43794	47163
9th	21488	23563	25647	26379	28490	29604	30138	30724	32006	34887
<b>Diversif. Educ.</b>	35028	37963	41598	43247	44989	48705	51147	54206	54791	56924
10th	19087	20708	22980	23311	24332	27006	28278	28343	29213	30828
11th	13166	14423	15556	16953	17452	17359	18888	21340	21129	22212
12th	2775	2832	3062	2983	3205	4340	3981	4523	4449	3884

**Appendix Table 4.5A**  
**Intra-annual education dropout by year enrolled and dependency, 1990-1999**

YEAR ENROLLED	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>TOTAL</b>	20275	20313	21891	20105	20682	25321	23201	23718	25726	23368
<b>I Cycle</b>	13400	13211	14063	13062	13479	16009	14590	14822	15428	14458
1st	6359	6719	6847	6420	6449	7464	6899	6863	7029	6797
2nd	3997	3661	3992	3745	4059	4601	4175	4485	4677	4214
3rd	3044	2931	3224	2897	2971	3944	3516	3474	3722	3447
<b>II Cycle</b>	6875	7102	7828	7043	7203	9312	8611	8896	10298	8910
4th	2732	2894	3108	2693	3024	3930	3620	3735	4474	3582
5th	2604	2601	2696	2651	2508	3119	3107	3094	3475	3273
6th	1539	1607	2024	1699	1671	2263	1884	2067	2349	2055
<b>TOTAL III CYCLE AND DIVERSIFIED EDUCATION, DAY</b>	13402	13342	17995	17731	19525	22685	20119	20280	21844	19422
<b>III Cycle</b>	10789	10709	14524	14725	16199	18645	16987	17641	18805	16669
7th	7810	7852	9756	10603	12093	13834	12858	13163	14053	12488
8th	1983	1896	2999	2668	2667	3326	2566	2936	3223	2798
9th	996	961	1769	1454	1439	1685	1563	1542	1529	1383
<b>Diversified Education</b>	2613	2633	3471	3006	3326	4040	3132	2639	3039	2753
10th	1914	1978	2504	2057	2437	3133	2476	1929	2336	2110
11th	569	571	823	794	739	847	562	651	533	496
12th	130	86	144	155	160	60	94	59	170	147
<b>ACADEMIC DAY</b>	10535	10092	13888	13678	15747	17205	15915	15617	16541	14898
<b>III Cycle</b>	8767	8284	11443	11637	13116	14223	13775	13737	14458	13015
7th	6349	6229	7760	8383	9823	10460	10355	10243	10920	9745
8th	1595	1387	2239	2064	2084	2421	2114	2248	2334	2183
9th	823	668	1444	1190	1209	1322	1306	1246	1204	1087
<b>Diversified Education</b>	1768	1808	2445	2041	2631	2982	2140	1880	2083	1883
10th	1387	1420	1855	1448	2022	2342	1760	1476	1761	1544
11th	373	387	567	566	559	640	377	400	316	339
12th	8	1	23	27	50	-	3	4	6	-
<b>TECHNICAL DAY</b>	2667	3250	4107	4053	3778	5480	4204	4663	5303	4524
<b>III Cycle</b>	2022	2425	3081	3088	3083	4422	3212	3904	4347	3654
7th	1481	1623	1996	2220	2270	3154	2503	2920	3133	2743
8th	388	509	760	604	563	905	452	688	889	615
9th	173	293	325	264	230	363	257	296	325	296
<b>Diversified Education</b>	845	825	1026	965	895	1058	992	759	956	870
10*	527	556	649	609	415	791	716	453	575	566
11*	196	184	256	228	180	207	185	251	217	157
12*	122	85	121	128	100	60	91	55	164	147
<b>TOTAL III CYCLE AND DIVERSIFIED EDUCATION, NIGHT</b>	8784	8697	8946	8655	9149	10620	8282	8685	9088	6663
<b>III Cycle</b>	6424	6508	6540	6383	6830	7508	5988	6018	6420	4968
7th	3581	3526	3504	3701	3993	4298	3376	.	.	2873
8th	1691	1708	1723	1608	1722	1891	1486	.	.	1142
9th	1172	1274	1313	1074	1115	1319	1126	.	.	853
<b>Diversified Education</b>	2360	2189	2406	2172	2319	3112	2294	2667	2668	1695
10th	1609	1371	1669	1472	1534	1997	1469	.	.	1124
11th	743	787	776	698	782	1110	817	.	.	566
12th	8	31	-39	2	-7	5	8	.	.	5
<b>ACADEMIC NIGHT</b>	8631	8558	8807	8400	9105	10449	8153	8487	8921	6554
<b>III Cycle</b>	6424	6508	6540	6383	6830	7508	5988	6018	6420	4968
7th	3581	3526	3504	3701	3993	4298	3376	.	.	2873
8th	1691	1708	1723	1608	1722	1891	1486	.	.	1142
9th	1172	1274	1313	1074	1115	1319	1126	.	.	853
<b>Diversified Education</b>	2207	2050	2267	2017	2275	2941	2165	2469	2501	1586
10th	1480	1303	1532	1361	1503	1873	1383	.	.	1054
11th	727	747	735	656	772	1068	782	.	.	532
<b>TECHNICAL NIGHT</b>	153	139	139	155	44	171	129	198	167	109
<b>Diversified Education</b>	153	139	139	155	44	171	129	198	167	109
1th	129	68	137	111	31	124	86	.	.	70
11th	16	40	41	42	20	42	35	.	.	34
12th	8	31	-39	2	-7	5	8	.	.	5

1/ Figures calculated respect to the Initial Enrollment for each year.  
Source: MEP Statistics Department.

**Appendix Table 4.5B**  
**Costa Rica: Intra-annual Education Dropout rates by year enrolled and dependency, 1990-1999**  
*(Intra-annual dropout as percentage of initial enrollment)*

YEAR ENROLLED	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>TOTAL PRIMARY</b>	4.7	4.5	4.6	4.1	4.2	5.0	4.5	4.5	4.9	4.4
I Cycle	5.3	5.1	5.2	4.7	4.8	5.7	5.1	5.1	5.4	5.0
1st	6.8	6.6	6.4	6.1	6.3	7.2	6.4	6.5	6.8	6.6
2nd	4.9	4.3	4.5	4.0	4.4	5.0	4.5	4.7	5.0	4.6
3rd	4.0	3.8	4.2	3.5	3.4	4.5	4.0	3.9	4.1	3.8
II Cycle	3.8	3.7	3.9	3.4	3.4	4.2	3.8	3.8	4.3	3.6
4th	3.9	4.0	4.2	3.6	3.8	4.6	4.2	4.3	5.0	3.9
5th	4.2	4.0	4.0	3.9	3.6	4.1	4.0	3.9	4.3	4.0
6th	3.1	2.9	3.5	2.8	2.7	3.6	2.9	3.0	3.3	2.9
<b>TOTAL HIGH SCHOOL, DAY</b>	10.3	9.6	11.9	11.1	11.6	12.7	11.0	10.8	10.9	9.2
III Cycle	11.4	10.6	13.3	12.7	13.1	14.3	12.9	13.0	12.9	10.8
7th	17.5	17.0	19.3	19.2	20.4	21.8	20.3	19.9	19.8	17.1
8th	6.9	6.1	9.1	7.7	7.4	8.8	6.8	7.5	7.4	6.0
9th	4.6	4.1	6.9	5.5	5.1	5.7	5.2	5.2	4.8	4.0
Diversified Education	7.5	6.9	8.3	7.0	7.4	8.3	6.1	5.0	5.5	4.9
10th	10.0	9.5	10.9	8.8	10.0	11.6	8.8	7.0	8.0	6.9
11th	4.3	4.0	5.3	4.7	4.2	4.9	3.0	3.1	2.5	6.9
12th	4.7	3.0	4.7	5.2	4.7	1.4	2.4	1.3	3.9	2.3
<b>ACADEMIC DAY</b>	10.3	9.3	11.7	10.9	11.8	12.3	11.1	10.6	10.5	9.1
III Cycle	11.1	9.9	12.6	12.1	12.8	13.3	12.6	12.4	12.1	10.5
7th	17.1	16.3	18.5	18.5	20.2	20.6	19.9	18.9	18.9	16.6
8th	6.7	5.4	8.2	7.2	6.9	7.8	6.7	7.0	6.6	5.8
9th	4.6	3.4	6.7	5.4	5.1	5.3	5.2	5.0	4.6	3.9
Diversified Education	7.8	7.2	8.9	7.0	8.4	9.0	6.1	5.2	5.4	4.7
10th	10.2	9.5	11.3	8.5	11.1	11.7	8.5	7.1	7.9	6.7
11th	4.2	3.9	5.1	4.8	4.4	5.0	2.7	2.6	2.0	2.0
12th	4.6	0.7	13.1	14.0	28.7		1.7	2.1	3.4	
<b>TECHNICAL DAY</b>	10.3	10.9	12.7	11.8	10.7	14.1	10.9	11.5	12.2	9.9
III Cycle	13.1	14.4	16.9	15.4	14.3	19.1	14.3	16.3	16.2	12.5
7th	19.4	20.5	23.0	22.9	21.2	27.4	22.2	24.1	23.6	19.2
8th	8.2	9.8	13.6	9.9	9.5	13.3	7.3	10.0	11.0	7.1
9th	5.4	7.9	8.2	6.1	4.8	7.6	5.2	5.9	6.0	4.7
Diversified Education	6.8	6.4	7.3	6.8	5.0	6.8	6.1	4.6	5.8	5.4
10th	9.5	9.7	9.9	9.6	6.9	11.3	9.5	6.6	8.4	7.7
11th	4.6	4.1	5.7	4.4	3.8	4.6	3.7	4.5	3.9	3.0
12th	4.7	3.2	4.2	4.6	3.3	1.4	2.4	1.3	3.9	4.0
<b>TOTAL SECUNDARIA NOCTURNA</b>	35.8	34.4	33.7	32.2	33.2	37.2	32.2	36.0	36.8	30.8
III Cycle	40.7	40.1	39.4	38.1	39.4	41.7	36.9	41.0	40.6	34.9
7th	51.4	50.0	49.0	51.6	50.8	52.5	46.5			44.0
8th	36.1	35.8	34.2	32.2	34.2	35.5	30.7			28.0
9th	28.2	28.8	29.8	23.4	25.1	29.3	27.2			26.2
Diversified Education	27.0	24.1	24.2	22.2	22.7	29.5	24.2	28.2	29.6	23.0
10th	31.3	27.0	30.3	27.5	27.3	33.9	27.1			28.7
11th	22.0	20.6	18.3	16.4	17.9	24.9	20.8			17.4
12th	3.4	19.0	-24.7	1.1	-3.7	2.6	5.4			2.6
<b>ACADÉMICA NOCTURNA</b>	36.3	34.8	34.2	32.6	34.0	37.6	32.5	36.2	37.1	31.2
III Cycle	40.7	40.1	39.4	38.1	39.4	41.7	36.9	41.0	40.6	34.9
7th	51.4	50.0	49.0	51.6	50.8	52.5	46.5			44.0
8th	36.1	35.8	34.2	32.2	34.2	35.5	30.7			28.0
9th	28.2	28.8	29.8	23.4	25.1	29.3	27.2			26.2
Diversified Education	27.6	24.5	24.8	22.4	24.1	30.1	24.5	28.3	30.2	23.4
10th	30.8	27.5	29.8	27.3	28.6	33.9	27.0			28.2
11th	22.8	20.6	18.3	16.4	18.5	25.2	21.1			17.6
<b>TÉCNICA NOCTURNA</b>	20.5	19.3	18.1	19.8	5.5	22.3	19.2	25.6	22.3	18.1
Diversified Education	20.5	19.3	18.1	19.8	5.5	22.3	19.2	25.6	22.3	18.1
10th	38.2	19.4	36.7	31.2	8.4	34.8	28.8			40.5
11th	9.0	19.2	17.3	17.5	8.3	19.4	15.5			14.5
12th	3.4	19.0	-24.7	1.1	-3.7	2.6	5.4			2.6

Source: MEP Statistics Department.

Appendix Table 4.5 C  
 Costa Rica: Repeaters cost by grade and level, 1990-1999  
 -en millones de dólares de 1999-

Year Enrolled	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total Primary</b>	20.8	20.2	19.1	16.7	18.3	20.1	25.1	22.6	22.5	21.5
<b>I Cycle</b>	15.7	15.2	14.7	13.2	14.3	15.1	17.6	15.7	15.2	14.4
1st	7.6	7.5	7.9	7.7	7.8	7.9	8.5	7.8	7.4	7.0
2nd	4.5	4.3	3.9	3.3	3.9	4.0	5.0	4.4	4.3	4.1
3rd	3.6	3.4	2.9	2.2	2.7	3.2	4.2	3.5	3.5	3.3
<b>II Cycle</b>	5.2	5.1	4.4	3.5	4.1	5.0	7.5	6.9	7.3	7.0
4th	2.9	2.8	2.5	1.9	2.3	2.9	4.3	3.9	4.2	3.8
5th	2.0	2.0	1.7	1.3	1.6	1.9	2.8	2.7	2.8	2.9
6th	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
<b>III Cycle and Diversif. Ed.</b>	9.1	10.1	8.9	11.0	10.4	13.0	14.0	14.5	14.7	15.1
<b>III Cycle</b>	7.3	8.1	7.0	9.2	8.9	10.8	11.5	12.1	12.3	13.0
7	4.3	4.6	4.0	5.0	5.4	6.4	7.1	7.4	7.8	8.2
8	2.0	2.3	2.1	2.7	2.3	2.9	2.9	3.1	3.1	3.4
9	1.1	1.2	0.9	1.4	1.2	1.5	1.5	1.6	1.4	1.4
<b>Diversified Education</b>	1.7	2.0	1.9	1.8	1.6	2.2	2.5	2.3	2.4	2.1
10	1.4	1.6	1.5	1.5	1.4	1.9	2.0	1.9	2.1	1.9
11	0.3	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.2
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

Appendix Table 4.5D  
 Cost of intra-annual education dropout by year enrolled and dependency, 1990-1999  
 Millions of US\$

Year enrolled	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total Primary</b>	8.6	8.6	9.3	8.5	8.8	10.7	9.8	10.1	10.9	9.9
<b>I Cycle</b>	5.7	5.6	6.0	5.5	5.7	6.8	6.2	6.3	6.5	6.1
1st	2.7	2.8	2.9	2.7	2.7	3.2	2.9	2.9	3.0	2.9
2nd	1.7	1.5	1.7	1.6	1.7	2.0	1.8	1.9	2.0	1.8
3rd	1.3	1.2	1.4	1.2	1.3	1.7	1.5	1.5	1.6	1.5
<b>II Cycle</b>	2.9	3.0	3.3	3.0	3.1	3.9	3.7	3.8	4.4	3.8
4th	1.2	1.2	1.3	1.1	1.3	1.7	1.5	1.6	1.9	1.5
5th	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.3	1.5	1.4
6th	0.7	0.7	0.9	0.7	0.7	1.0	0.8	0.9	1.0	0.9
<b>III cycle and Diversified Education</b>										
<b>Day</b>	9.0	9.0	12.1	11.9	13.1	15.2	13.5	13.6	14.7	13.1
<b>III Cycle</b>	7.3	7.2	9.8	9.9	10.9	12.5	11.4	11.9	12.6	11.2
7th	5.2	5.3	6.6	7.1	8.1	9.2	8.6	8.8	9.4	8.4
8th	1.3	1.3	2.0	1.8	1.8	2.2	1.7	2.0	2.2	1.9
9th	0.7	0.6	1.2	1.0	1.0	1.1	1.1	1.0	1.0	0.9
<b>Diversified Education</b>	1.8	1.8	2.3	2.0	2.2	2.7	2.1	1.8	2.0	1.9
10th	1.3	1.3	1.7	1.4	1.6	2.1	1.7	1.3	1.6	1.4
11th	0.4	0.4	0.6	0.5	0.5	0.6	0.4	0.4	0.4	0.3
12th	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1

**Appendix Table 4.6: Costa Rica:**  
**Years of education by simple ages per gender. 1999 (sample)**

Age Simple	BOTH		
	Mean	N	Std.
25	7.70	659	3.83
26	7.77	560	3.83
27	7.62	649	3.97
28	7.98	637	3.87
29	7.73	630	3.86
30	7.68	739	3.69
31	8.03	564	3.86
32	7.84	648	3.67
33	7.93	627	3.98
34	8.08	617	4.04
35	8.10	665	3.96
36	8.15	605	3.93
37	8.25	622	3.97
38	7.73	694	4.01
39	7.93	609	4.11
40	8.20	643	3.95
41	7.74	404	4.10
42	7.59	571	3.93
43	7.46	508	4.46
44	7.03	415	4.23
45	7.66	454	4.13
46	7.09	386	4.17
47	6.69	325	4.25
48	6.48	340	4.27
49	6.06	342	4.11
50	6.51	449	4.38
51	6.22	249	4.35
52	6.04	302	5.10
53	5.18	283	4.26
54	5.20	274	4.46
55	5.72	253	4.42
56	5.28	208	4.30
57	4.67	194	3.87
58	4.60	212	4.16
59	4.88	195	4.40
60	4.88	256	4.37
<b>Total</b>	<b>6.75</b>	<b>19.82</b>	<b>4.33</b>

Source: National Statistics and Census  
 Multipurpose Household

Appendix Table 4.7		YEAR 2000		ORDINARY		TOTAL ORDINARY	TOTAL CAPITAL	TOTAL BUDGET	TOTAL AS % OF THE MEP EXPENDITURE
COMPONENTS AND SUBCOMPONENTS	PERSONAL		NON PERSONAL						
	That comes from the previous year	For new positions and other new amounts	That comes from the previous year	For new positions and other new amounts					
<b>1 Increase the pre-school coverage.</b>									
1.1 Increase coverage	6,513.80	1,051.60			7,565.40		7,565.40	3.5071%	
1.2 Assure pedagogical component.									
<b>2 Intensify excellence in basic education.</b>									
2.1 Decrease inefficiency		110.90			110.90		110.90	0.0514%	
2.2 Improve learning evaluation	1,226.00	136.20			1,362.20		1,362.20	0.6315%	
2.3 Improve Informations system	754.20	1,359.70			2,113.90	1,169.00	3,282.90	1.5218%	
2.4 Include parents					0.00		0.00		
<b>3 Strengthen middle education for youth from 13 to 18 years old.</b>									
3.1 Increase coverage	49,649.50	2,179.00			51,828.50		51,828.50	24.0260%	
3.2 Pedagogical issues.					0.00	1,118.40	1,118.40	0.5185%	
<b>4 Promote equity in education.</b>									
4.1 School Food Centers	2,145.00		4,355.00		6,500.00		6,500.00	3.0132%	
4.2 School Transportation			1,800.00	270.00	2,070.00		2,070.00	0.9599%	
4.3 School scholarships	90.00		555.20	284.00	929.20		929.20	0.4307%	
4.4 School bond			750.00	150.00	900.00		900.00	0.4172%	

Appendix Table 4.8	YEAR 2001				TOTAL ORDINARY	TOTAL CAPITAL	TOTAL BUDGET	TOTAL AS % OF THE MEP EXPENDITURE
	ORDINARY							
	PERSONAL		NON- PERSONAL					
COMPONENTS AND SUBCOMPONENTS	That comes from the previous year	For new positions and other new amounts	That comes from the previous year	For new positions and other new amounts				
1 Increase the pre-school coverage.								
1.1 Increase coverage.	9,011.50	1,763.80			10,775.30		10,775.30	4.2437%
1.2 Assure pedagogical component.				2.20	2.20		2.20	0.0009%
2 Intensify excellence in basic education.								
2.1 Decrease inefficiency	118.40	1,090.00			1,208.40		1,208.40	0.4759%
2.2 Improve learning evaluation	1,362.20	149.00	4.80	21.80	1,537.80		1,537.80	0.6056%
2.3 Improve Informations system	2,258.00	901.80			3,159.80	1,169.00	4,328.80	1.7049%
2.4 Include parents			3.00	0.00	3.00		3.00	0.0012%
3 Strengthen middle education for youth from 13 to 18 years old.								
3.1 Increase coverage	55,689.10	3,304.00			58,993.10		58,993.10	23.2338%
3.2 Pedagogical issues.			43.00		43.00	1,118.40	1,161.40	0.4574%
4 Promote equity in education.								
4.1 School Food Centers	2,145.00	101.95	4,355.00	204.35	6,806.30	53.50	6,859.80	2.7017%
4.2 School Transportation			2,070.00	522.40	2,592.40		2,592.40	1.0210%
4.3 School scholarships	90.00	60.00	839.20	1,010.80	2,000.00		2,000.00	0.7877%
4.4 School bond			900.00		900.00		900.00	0.3545%

Appendix Table 4.9	YEAR 2002				TOTAL ORDINARY	TOTAL CAPITAL	TOTAL BUDGET	TOTAL AS % OF THE MEP EXPENDITURE
	ORDINARY							
	PERSONAL		NON- PERSONAL					
COMPONENTS AND SUBCOMPONENTS	That comes from the previous year	For new positions and other new amounts	That comes from the previous year	For new positions and other new amounts				
1 Increase the pre-school coverage.								
1.1 Increase coverage.	11,320.80	885.10			12,205.90		12,205.90	4.0739%
1.2 Assure pedagogical component.			2.20	2.20	4.40		4.40	0.0015%
2 Intensify excellence in basic education.								
2.1 Decrease inefficiency	1,269.70	1,244.80			2,514.50		2,514.50	0.8392%
2.2 Improve learning evaluation	1,511.30	112.40			1,623.70		1,623.70	0.5419%
2.3 Improve Informations system	3,319.80	882.50			4,202.30	1,285.90	5,488.20	1.8318%
2.4 Include parents			3.10	7.30	10.40		10.40	0.0035%
3 Strengthen middle education for youth from 13 to 18 years old.								
3.1 Increase coverage	62,128.70	3,707.10			65,835.80		65,835.80	21.9736%
3.2 Pedagogical issues.			43.00		43.00	1,234.50	1,277.50	0.4264%
4 Promote equity in education.								
4.1 School Food Centers	2,245.65	269.48	4,559.35	548.58	7,623.06	59.92	7,682.98	2.5643%
4.2 School Transportation			2,592.40	179.34	2,771.74		2,771.74	0.9251%
4.3 School scholarships	150.00	25.00	1,850.00	475.00	2,500.00		2,500.00	0.8344%
4.4 School bond			900.00	450.00	1,350.00		1,350.00	0.4506%

**Policies Matrix. Education Component**

Objectives	Issues	Agency responsible	Board Presentation	Second tract
<p>1. Increase coverage and improve the quality of the early childhood development programs (ECD)</p>	<p>Coverage of 5.5-6.5 year olds is close to 82.8% but for the 4.6-5.5 year olds it is only 5.8%. The urban coverage for children 4.6-5.5 and 5.5-6.5 years old is 11.4% and 93.3% respectively, but in the rural areas it is 1.8% y 76% .</p> <p>Not all the ECD programs include a pedagogical component.</p>	<p>Ministry of Public Education (MEP)</p>	<p>Plan for increasing the coverage is ready.</p> <p>Material for teacher training is ready to be validated and learning material list for the class ready to be ordered.</p>	<p>Obtain good progress in reaching the 14% coverage for children 4.6-5.5 years old and 87% for the children 5.5-6.5 years old.</p> <p>In-service entertainment using the new pedagogical modules being implemented.</p> <p>Considerable progress in the inclusion of the pedagogical component of the ECD programs.</p>
<p>2. Improve the quality of the basic education (grades 1-6)</p>	<p>The repetition and drop out rates are high: 13.4% and 6.8% in first grade and 21.1% and 19.8% in sixth grade.</p> <p>There is low achievement of the reading, writing and math learning skills.</p> <p>Information coverage is low in the first and second cycle.</p> <p>The legislators and teachers are not using enough the discoveries of learning assessment.</p> <p>Parents get very little involved in their children's education.</p>	<p>MEP</p>	<p>Set goals for reducing repetition and drop out and improve the reading, writing and math results</p> <p>Develop and validate training module for teachers in reading, writing and math for first grade in 100 schools of the Excellence Program.</p>	<p>Evaluate the progress in reaching the goals in repetition, drop out and learning.</p> <p>Considerable progress in the use of the learning evaluation results in a more productive manner by the teachers and legislators</p> <p>Complete first grade teachers training in 100 schools of the Excellence Program</p> <p>Complete the installation of 45 information labs in 100 schools of the Excellence Program.</p> <p>Establish a Parents Association in the 100 schools of the Excellence Program.</p>

Objectives	Issues	Agency responsible	Board Presentation	Second Tract
<p>3. Increase coverage and improve quality of the high school education (grades 7-11/12), for youngsters from 13 to 18 years old</p>	<p>Costa Rica needs to continue developing a work force better educated, highly capable and capable of being trained.</p> <p>Enrollment for 13-18 year olds in high school has noticeably dropped in recent years. MEP proposes increase the coverage from 66 to 72% by means of an options menu, including traditional schools, distance learning, open access to education, Virtual Schools and vocational training.</p> <p>Close to 30% of the high school student have no access to information systems</p> <p>Parents get very little involved in their children's education</p>	<p>MEP and private sector</p>	<p>Complete curricular review.</p> <p>Develop and validate teachers training modules for Virtual Schools and distance learning.</p> <p>Initiate contacts and discussions with the Chamber of Industry and Commerce for validating the curriculum reviews and establishing cooperation mechanisms in order to strengthen and improve the relevance of high school education.</p>	<p>Evaluate preliminary results of the pilot Virtual School, distance learning and tele-high schools.</p> <p>Install 15 additional informatics labs in the 3<sup>rd</sup> cycle.</p> <p>Establish a Parents Association in the high schools.</p>
<p>4. Improve equity in education improving the receptors' goal</p>	<p>The school lunch program is not based on goals and its impact has not been evaluated.</p> <p>Close to one third of the transport subsidy user do not need it and other students are not covered.</p> <p>The scholarships are granted based on specific schools and not on the student's individual necessities.</p> <p>The school bond does not have the neediest primary and high school students as goal.</p>	<p>MEP</p>	<p>Prepare receptors criteria for the school lunch, school transport, scholarships and school bonds programs.</p> <p>Prepare master list that individually identify the students that will benefit with the scholarships and school bond programs.</p>	<p>Satisfactory introduction</p>

## STATISTICS ANNEX: HEALTH SECTOR

*Appendix Table 5.1 Coverage of some health services*

Country	Population with access to drinking water (%)			Sewage and excreta disposal (%)			Immunization coverage in children < 1 year old (%)			
	Total	Urban	Rural	Total	Urban	Rural	DTP3	OPV3	BCG	Measles
Costa Rica	94.5	99.6	90.5	97	100	95	85	85	87	86
Mexico	83	93	57	76	93	29	92	-	-	90
Chile	91	99	47	81	95	-	92	-	-	93
Argentina	65	71	24	75	80	42	66	-	-	76
Brazil	69	80	28	67	74	43	69	-	-	78
U. K.	100	-	-	96	-	-	92	-	-	92
U.S.A.	90	-	-	85	-	-	94	-	-	89

SOURCE: Costa Rica: 1999 Basic Indicators, Health Ministry

The World Bank: World Development Report 1999/2000

Pan American Health Organization. Health Statistics from the Americas, 1998 edition.

*Appendix Table 5.2 Total expenditure of the CCSS*

Year	Total expenditure <sup>1</sup>			Real expenditure	
	nominal	GDP %	real <sup>2</sup>	per insured m. <sup>3</sup>	% crcmt.
90	30.1	4.4	67.3	25.9	
91	37.6	4.3	65.4	24.5	-5.6
92	46.7	4.1	66.7	24.3	-0.8
93	61.6	4.5	80.2	28.5	17.3
94	73.4	4.5	84.1	29.2	2.5
95	90.8	4.4	84.6	28.7	-1.9
96	110.8	4.6	87.8	28.0	-2.2
97	125.4	4.2	87.7	27.8	-0.9
98	151.6	4.2	95.0	29.2	4.9
99	185.0	4.3	105.3	31.7	8.9

<sup>1</sup> In billions of colones. Includes the subsidy for sickness, maternity and the administrative cost. <sup>2</sup> Includes the general IPC annual average

<sup>3</sup> In thousands of colones.

SOURCE: CCSS, except GDP and IPC (BCCR website), and own calculations.

**Appendix Table 5.3 CCSS. Medical personnel relationship**

Year	Total	CCSS Employees				Nurses/	Med. Aux./
		Physicians	Nurses	Med. Prof.	Med. Aux.	Physician	Med. Prof.
90	25.86	2.52	1.37	4.69	8.18	0.54	1.74
91	25.60	2.53	1.48	4.80	8.06	0.58	1.68
92	26.19	2.61	1.62	5.05	8.31	0.62	1.65
93	26.62	2.65	1.63	5.09	8.70	0.62	1.71
94	27.23	2.76	1.69	5.27	8.91	0.61	1.69
95	27.68	2.85	1.10	5.39	9.22	0.39	1.71
96	28.24	2.94	1.14	5.58	9.56	0.39	1.71
97	28.74	3.02	1.13	5.70	9.95	0.38	1.74
98	30.34	3.18	1.16	5.96	10.94	0.36	1.84
99	31.09	3.33	1.20	6.27	11.31	0.36	1.80

NOTE: In thousands of persons. Medical Professions include physicians, dentists, pharmacists, microbiologists, psychologists, nurses and other medical personnel. Med. Prof. Auxiliaries, include nurse assistant, pharmacist and other assistants.

SOURCE: CCSS and own calculations

**Appendix Table 5.4 Tax charges of the dependant workers contribution**

Year	Total <sup>1</sup> dependent contributions			Real contrib.	Real expendit.	Contrib.	In % of
	nominal	real <sup>2</sup>	% crcmt.	per dependent	/ Insured mem. <sup>3</sup>	- Expenditure	Real expend.
90	26.0	58.2		106.8	74.6	32.2	43.2
91	32.0	55.7	-4.3	100.4	69.1	31.3	45.3
92	40.9	58.5	5.0	98.3	67.3	31.0	46.1
93	51.6	67.2	14.8	107.4	78.8	28.6	36.2
94	64.1	73.5	9.4	114.2	79.5	34.7	43.6
95	81.7	76.1	3.5	116.3	78.4	37.9	48.4
96	96.6	76.5	0.6	117.9	75.3	42.6	56.6
97	113.0	79.1	3.3	119.7	71.6	48.1	67.1
98	138.4	86.7	9.6	126.4	75.6	50.8	67.2
99	165.0	93.9	8.3	130.9	78.1	52.9	67.7

NOTE: in billions of colones, values per dependent. in thousands. <sup>1</sup> quotas workers and employers only.

<sup>2</sup> January 1995 colones, using the general IPC annual average. <sup>3</sup> Includes relatives expenditures.

SOURCE: CCSS, except IPC ( BCCR website), and own calculations.

**Appendix Table 5.5 Average, Gini Coefficient, Fraction attributed to inequity and variation percentage explained by the context according to health indicator and year of survey (Costa Rica, Fertility Survey, 1992 and 1999)**

Health indicator	Average		Gini Coefficient		Fraction attributed to inequity		Variation percentage explained by context	
	1992	1999	1992	1999	1992	1999	1992	1999
	Dead children	9.5	6.4	0.18	0.43	0.29	0.59	0.68
Infant mortality rate	1.4	—	0.64	—			0.27	—
Diarrhea	8.5	5.9	0.18	0.28	0.33	0.42	0.56	0.43
Respiratory infection	16.2	9.7	0.14	0.27	0.22	0.45	0.48	0.44
Low weight at birth	6.3	6.4	0.15	0.31	0.21	0.42	0.48	0.66
Multiparity	11.1	9.6	0.42	0.41	0.70	0.76	0.45	0.41
Pregnancy in adolescents	29.4	33.2	0.28	0.28	0.58	0.54	0.40	0.43
Unwished pregnancy	42.3	41.8	0.05	0.13	0.06	0.21	0.51	0.63
Lack of maternal breast-feeding	23.9	15.6	0.09	0.32	0.13	0.46	0.59	0.63
Short interval between births	26.7	21.8	0.12	0.15	0.19	0.22	0.39	0.57
Lack of knowledge of family planning	33.9	27.6	0.30	0.35	0.53	0.68	0.52	0.41
Percentage with no oral serum at home	60.2	—	0.07	—	0.11	—	0.43	—
Lack of current family planning	35.4	29.1	0.12	0.09	0.18	0.13	0.52	0.39
Lack of past family planning	9.3	7.8	0.26	0.27	0.42	0.46	0.62	0.67
Lack of vaginal citology every year	52.7	47.1	0.06	0.10	0.09	0.16	0.38	0.6
Children with incomplete vaccination scheme	6.4	6.3	0.21	0.62	0.31	0.89	0.5	0.82
Lack of pre-natal control	25.9	14.2	0.19	0.22	0.28	0.35	0.52	0.73
Lack of professional help in labor	2.3	1.9	0.62	0.71	0.92	1.00	0.62	0.35
Lack of sick child's medical attention	48.2	44.6	0.09	—	0.14	—	0.73	—
Lack of access to health services	6.6	7.9	0.03	0.03	0.04	0.04	1.00	1.00
Lack of access to family planning helpers	15.6	6.6	0.09	0.03	0.13	0.04	1.00	1.00

Source: Taken from the Technical Document "Equity and maternal-infant health in". PAHO, 2001.

**Appendix Table 5.6 Public Opinion, CCSS Services**

Statement	Yes/Agree (%)	No/Disagree (%)
The external medical is good	19	51
The clinics and hospitals give terrible services	44	26
Has received deteriorated medicine?	71	21
Has suffered malpraxis	18	81
Is malpraxis increasing?	62	13

Note: The remaining percentage is don't know, don't respond, or don't care.

Source: UCR and CCSS, Evolution of the Public Opinion Structures in Costa Rica - 1999

**Appendix Table 5.7. Public Opinion: Opening to changes**

	Yes/disagree (%)	No/disagree (%)
If the CCSS improves, would you be willing to pay more?	70	26
Must free medical election be fostered?	62	13
Private sector must be introduced in some hospitals.	51	23
The hospitals must be run as real companies.	68	17

NOTE: The remaining percentage is don't know, don't respond, or don't care.

SOURCE: UCR and CCSS, Evolution of the Public Opinion Structures in Costa Rica - 1999





**IMAGING**

Report No.: 24300 CR  
Type: SR