

WORLD BANK**POVERTY AND SOCIAL IMPACT ANALYSIS****(PSIA)****SOCIAL EXPENDITURE AND ITS RELATION TO POVERTY AND
EQUITY IN BOLIVIA**

(Document prepared by the World Bank with contributions from the UPF and UDAPE)

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ABBREVIATIONS AND ACRONYMS

AFP	Pension Fund Administrator (<i>Administradora de Fondos de Pensiones</i>)
CNS	National Health Care Fund (<i>Caja Nacional de Salud</i>)
DGC	General Accountancy Direction (<i>Dirección General de Contaduría</i>)
ECLAC	Economic Commission for Latin America and the Caribbean
ENDSA	National Population and Health Survey (<i>Encuesta Nacional de Demografía y Salud</i>)
GDP	Gross Domestic Product
HIPC	Heavily Indebted Poor Countries
IDB	Interamerican Development Bank
IMF	International Monetary Fund
INE	National Statistics Bureau (<i>Instituto Nacional de Estadística</i>)
MECOVI	Improvement of Surveys and Measurement of Living Conditions (<i>Mejoramiento de las Encuestas y Medición sobre las Condiciones de Vida</i>)
PAE	Primary Adult Education
PAN	Support Program for Children under 6 (<i>Programa de Apoyo a la Niñez menor de 6 años</i>)
PEM	Public Expenditure Management for Fiscal Sustainability and Equitable and Efficient Public Services
PLANE	National Emergency Employment Plan (<i>Plan Nacional de Empleo de Emergencia</i>)
PSIA	Poverty and Social Impact Analysis
SIGMA	Integrated Administrative Management and Modernization System (<i>Sistema Integrado de Gestión y Modernización Administrativa</i>)
SUMI	Universal Mother-Child Insurance (<i>Seguro Universal Materno Infantil</i>)
TGN	Treasury (<i>Tesoro General de la Nación</i>)
UBN	Unsatisfied Basic Needs
UDAPE	Social and Economic Policy Analysis Unit (<i>Unidad de Análisis de Políticas Sociales y Económicas</i>)
UPF	Fiscal Programming Unit (<i>Unidad de Programación Fiscal</i>)
VIPFE	Vice-Ministry of Public Investment and External Funding (<i>Viceministerio de Inversión Pública y Financiamiento Externo</i>)

PRESENTATION

One of the problems the public sector faces when preparing its budget is the lack of information on the degree of equity, as well as on the efficiency and effectiveness of public expenditure. Among other things, as this information is unavailable it is impossible to focus public resources based on poverty criteria and criteria related to the impact of the expenditure on the population that is supposedly benefited with the State interventions.

The objective of this study is to provide the government with information and a basis for its analysis to ensure inclusion of one of the mentioned deficiencies in public spending policies aimed at a better allocation of public resources, that is to say, equity in public expenditure.

Currently, public spending has an important social component; in 2003, 59% of government expenditure was destined to education, health, pensions, rural development, basic sanitation and urbanism. Nonetheless, no information is available on the beneficiaries of this expenditure, or the pro-poor focus of expenditure.

Information on the incidence of public social expenditure in the poor and non-poor population will enable economic authorities as well as other actors involved in or influencing public policymaking, to have more criteria and elements for assessment as regards distribution criteria and the definition of priorities in public expenditure, and based on results of the study, to analyze possible resource reallocations.

The World Bank carried out this study with support from the Fiscal Programming Unit (UPF) of the Ministry of Finance and the Social and Economic Policy Analysis Unit (UDAPE), as the principal public entities in charge of social expenditure accounting and analysis.

The document was prepared under the approach of the Poverty and Social Impact Analysis (PSIA), which is defined as the analysis of the – wanted or unwanted – effects of policy interventions on the welfare of different groups, especially the poorest groups.

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INTRODUCTION

In the last five years, the Bolivian economy has operated in a context characterized by a deep crisis resulting from both internal and external factors, which has had an impact on increasingly recurrent political instability and social protest.

From a fiscal perspective, the economic crisis has resulted in a strong increase of the public deficit, as the income has been lower than projections and spending has turned out to be considerably inflexible.

However, even in this unfavorable context, the participation of public social expenditure in total expenditure has been on the increase, i.e. a growing proportion of public expenditure is destined to health care, education, pensions, rural development, basic sanitation and urbanism. Social expenditure in these areas increased from 53.5% of the central government's public expenditure in 1998 to 59.1% in 2003.

It is however important to not only measure this effort in quantitative terms, but also in qualitative terms; in other words, to assess the incidence of public social expenditure in terms of quality of the expenditure, considering the incidence thereof on certain population groups.

This document assesses public expenditure in terms of the level of equity, with the purpose of including more elements in discussions on budget policymaking and policies for public resource allocation and prioritization that do not only consider the traditional aspects considered in fiscal policymaking of a financial and macroeconomic nature, but also aspects related to the incidence of public spending on the target population.

The study is subdivided into three chapters. After a short introduction on the way in which social expenditure is measured in Bolivia and the methodology applied in the study to measure the incidence of public expenditure (these aspects are further detailed in the annexes), the first chapter analyzes Bolivian social expenditure in the Latin American context and makes a summarized evaluation of its recent evolution.

The second chapter separately analyzes findings as regards equity in the current and capital public social expenditure, and finally, the third chapter contains the conclusions and recommendations of the study.

1. PUBLIC SOCIAL EXPENDITURE IN BOLIVIA

1.1 General background on the measurement of Public Social Expenditure

The Fiscal Programming Unit (UPF) in the Ministry of Finance is in charge of measurement and follow-up of public social expenditure in Bolivia. Social expenditure includes the current and capital expenses in the following sectors: health care, education, basic sanitation, urbanism and housing, rural development and pensions.¹

The information on current social expenditure mainly comes from the institutional classification of this expenditure, i.e. social expenditure is associated with the expenditure incurred by the public entities involved in this sector. For example, the primary source of information for spending in education and health is the expenditure executed by the ministries of education and health.²

The information on social capital expenditure comes from public investment projects registered by the VIPFE, as well as from capital expenses made by municipalities with HIPC resources, which are registered by the UPF.

1.2 General background on the Methodology Applied in this Study³

The current social expenditure quantified by the UPF includes expenses in education, health and pensions. Estimates on equity in current public expenditure are based on information from MECOVI surveys 1999 and 2002, the Ministry of Education and the UPF.

In general terms, the methodology used to measure equity in the current social expenditure consisted in obtaining poverty structures and income deciles based on MECOVI surveys. This survey was used to identify the persons who used public education and health services⁴; on the other hand, in the pension sector, pensioners were identified, classifying them on the basis of their poverty status and income quintiles. The calculated structures were used to distribute public expenditure and then make an analysis on the progressivity or regressivity of expenditure.⁵

¹ This study includes the PLANE as a new category of social capital expenditure (before, this program formed part of Rural Development). For more details on this and other methodological issues, see Annex on Methodology.

² However, as is mentioned in the annex on methodology, a functional classification of public expenditure would allow for more precision on social spending (see annex on methodology).

³ A more detailed explanation on the used methodology is included in the annex on methodology.

⁴ In the case of education, the children enrolled in public schools were identified, whereas in the case of health, attendances in public health care centers were identified.

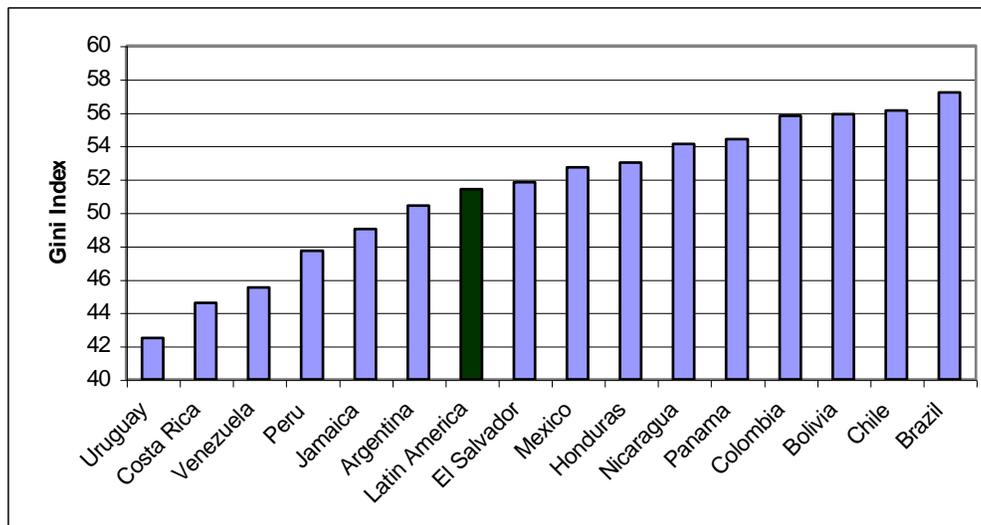
⁵ For example, in the case of education, the MECOVI survey established that 76.3% of enrolled students come from poor households and 33.7% from non-poor households. The same proportion was applied to public spending in primary education, i.e. the assumption is that 76.3% of expenditure at this level of education favored students living in poor households.

In order to have a rough idea of the level of equity in capital expenditure, the amount of the executed public investment in municipalities was related to Unsatisfied Basic Needs (UBN) registered in the municipalities in the Census 2001. This was done taking into account that in view of the fact that UBN allow for measurement of the structural poverty level⁶ of a country, insofar as more public investment resources are destined to the municipalities with higher UBN levels, through direct and indirect impacts, both the level of absolute poverty of structural poverty and existing gaps or inequalities among the municipalities will decrease.

1.3 Bolivia's Social Spending in the Latin American Context

Bolivia is not only one of the poorest countries in Latin America, but it is also one of the countries with the worst income distribution of the region. The Gini coefficient⁷ shows that only Brazil and Chile do worse than Bolivia as regards inequality in income distribution.

Graph N° 1
Gini Coefficient
Measured at the end of the nineties or beginning of the 2002s



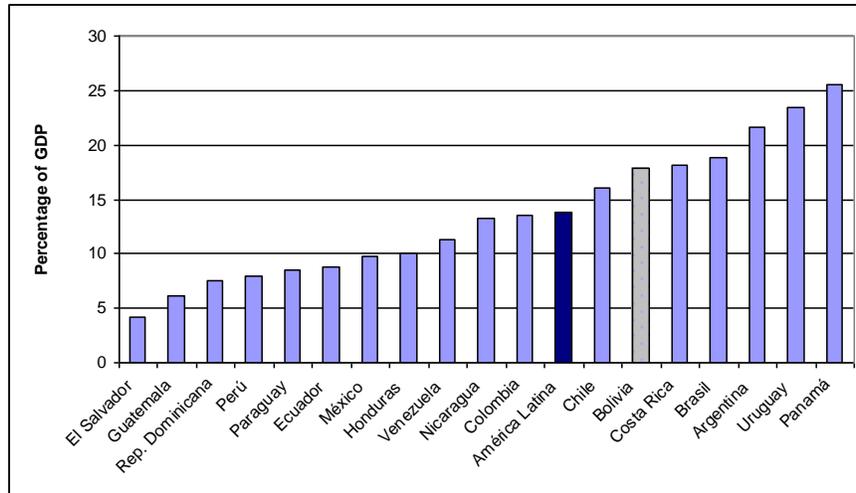
Source: Inequality in Latin American and the Caribbean. Breaking with History? World Bank Latin American and Caribbean Studies. 2003

⁶ With the UBN methodology, it is possible to assess the condition of housing infrastructure, energy input, levels of education and health care of the population. These aspects represent a structural poverty measure, which is different from that obtained when measuring the population's income, which is related to employment and economic cycle variables and which is called cyclical poverty. (Excerpted from "Bolivia: Poverty Map 2001". INE-UDAPE)

⁷ The Gini coefficient is a measure to summarize the extent to which the consumption or income distribution differs from a hypothetical uniform distribution where every person or household would receive an identical part. The higher the coefficient is the deeper inequality in income distribution. The Gini coefficient assumes values between 0 (perfect equality in distribution) and 1 or 100 (complete inequality).

Nonetheless, in terms of public sector efforts to decrease social disparities and improve the standard of living of the population, which is measured through social expenditure as a percentage of GDP, Bolivia is one of the Latin American countries destining most public resources to education, health, social security, housing and other social expenses. As a percentage of GDP, social expenditure in Bolivia is on the sixth place in 2000-2001 out of 18 Latin American countries.

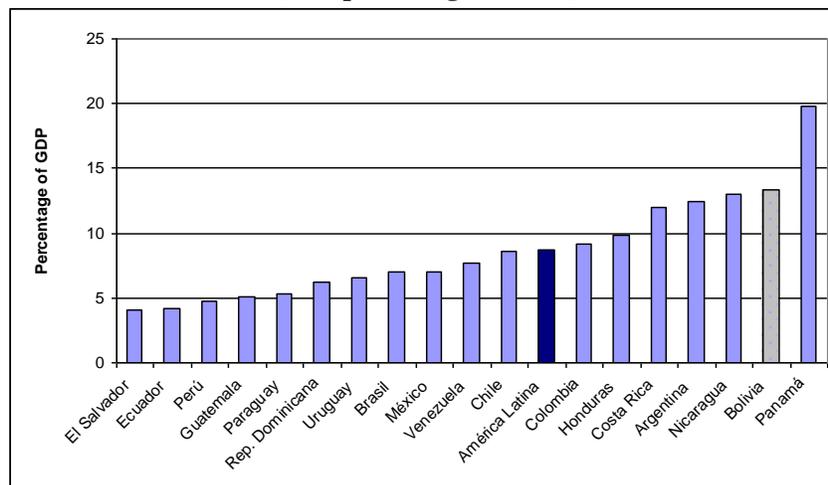
Graph N° 2
Latin America: Public Social Expenditure in Latin America 2000-2001
(As a percentage of GDP)



Source: Panorama of Social Expenditure in Latin America. ECLAC. 2003.

On the other hand, if the expenditure in social security is excluded, the social priority in Bolivia's public expenditure is even more significant as it then comes on the second place, after Panama, as regards public resources destined to social purposes.

Graph N° 3
Latin America: Public Social Expenditure in Latin America 2000-2001
Excluding Social Security
(As a percentage of GDP)



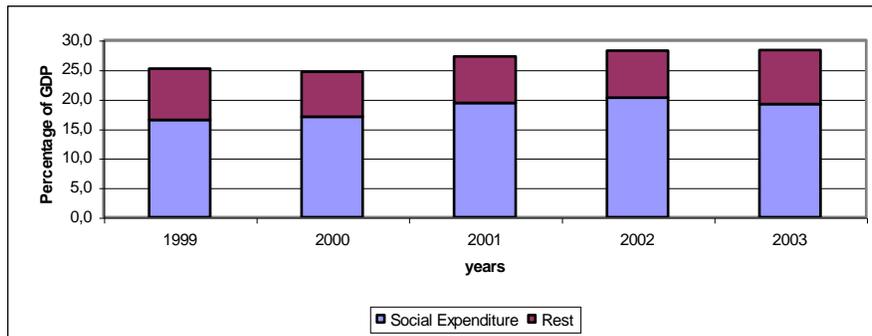
Source: Panorama of Social Expenditure in Latin America. ECLAC. 2003.

This shows that even though Bolivia displays one of the worst panoramas in Latin America as regards income distribution, at the same time it is one of the countries in the region making most efforts to improve the standard of living of its population, so that the population would have possibilities of increasing its income.

1.4 Recent Evolution of Social Expenditure in Bolivia

A large part – and a growing proportion – of resources collected by the Bolivian State either through taxes or external assistance are destined to social expenditure. On average, in the last four years, 59% of the General Government’s total expenditure⁸, was destined to Education, Health, Rural Development, Basic Sanitation, Urbanism and Housing and Pensions.⁹

Graph N° 4
General Government Spending and Social Expenditure
(In percentage of GDP)



Source: Prepared on the basis of information from the UPF

Preliminary numbers for 2003 show a drop in social expenditure of approximately 1% of GDP. Ninety percent (90%) of this drop is explained by the lower social capital expenditure, which mainly results from the lack of government counterpart resources to implement public investment projects and from the adjustment policies applied to decrease the public sector deficit.

On the other hand, resources coming from the Dialogue Law 2000 (HIPC resources), explain to a large extent the growth of social expenditure between 2001 and 2002 and probably avoided a deeper drop in social expenditure in 2003. In other words, even

⁸ The financial public sector includes state companies, but as social expenditure forms part of the expenditure of the general government and results from the public policies applied at this level, and as the operations of public companies are not linked to social topics, reference is made to the proportion of social expenditure as regards expenditure of the general government and not to expenditure of the financial public sector as a whole.

⁹ In addition, a second categorization of social expenditure was established, called the “Pro-poor Expenditure” or the “Basic Social Expenditure”, which does not include the expenditure in pensions and the expenditure in education for universities, as these are not considered pro-poor or do not directly contribute to a decrease of poverty. This study measures equity of social expenditure as a whole, i.e. both pro-poor social expenditure and pensions and universities.

though the expanded HIPC Initiative did not imply a fiscal alleviation, it did enable a reorientation of public expenditure towards social objectives.¹⁰ Expenses in education account for the highest proportion of social expenditure (7.5% of GDP in 2003), followed by expenses in pensions (4.5% of GDP) and health (3.8% of GDP).

Table N° 1
Social Expenditure
(In percentage of GDP)

	1999	2000	2001	2002	2003 (e)
Total Social Expenditure	16.5	17.0	19.3	20.3	19.2
Health	3.3	3.5	3.8	3.8	3.8
Education	6.2	6.1	7.3	8.0	7.5
Basic Sanitation	1.2	1.1	0.9	0.6	0.5
Urbanism	0.6	0.6	0.8	0.8	0.7
Rural Development	1.2	1.3	1.7	1.7	1.5
O/w : Community roads	0.5	0.5	0.7	0.8	0.7
Multisectoral	0.0	0.0	0.0	0.0	0.1
PLANE	0.0	0.0	0.0	0.4	0.3
Pensions ⁽¹⁾	3.7	4.1	4.5	4.6	4.5
Rest ⁽²⁾	0.3	0.3	0.3	0.3	0.3
Of which					
Expenditure with HIPC resources⁽³⁾	0.0	0.0	0.2	1.0	1.1

Source: Prepared on the basis of information from the UPF

- (1) Does not include contributions from the public sector to AFPs
- (2) Includes contributions from the public sector to AFPs and expenditure in "Social Management of Prefectures"
- (3) Considers the Solidarity Fund, SUMI and expenses of municipalities
- (e) Estimate

As a result of orienting the expenditure more towards health care and education, the country has achieved important progress in these two fields.

The second report "Progress of Millennium Development Goals" published by INE, UDAPE and the United Nations in 2002, says that by 2015 probably Bolivia will achieve the millennium goals related to universal primary education¹¹, as well as regarding the reduction of maternal mortality (the goal is to reduce this by three quarters between 1990 and 2015) and the reduction of infant mortality (the goal is to reduce the mortality rate of children under 5 by two thirds between 1990 and 2015).

¹⁰ The Dialogue Law 2000 and the corresponding regulations create two main targets for HIPC II resources: (i) the Municipal Solidarity Fund (FSM) for school education and health; and (ii) the Special Account of the Dialogue 2000. As regards the FSM, an annual amount of USD 27 million was destined for 2002-2016, which will be used mainly for salaries in education and health, and the Universal Mother-Child Insurance (SUMI). The resources of the special account dialogue 2000 will be destined as follows: 20% to improve the quality of public school education, 10% to improve the quality of health care and 70% for productive and social infrastructure. In relation to the 70%, this percentage must be distributed to municipalities according to the UBN index.

¹¹ In Bolivia, primary education is obligatory and free and covers eight years. The report on progress in achievement of the MDGs emphasizes that as opposed to other countries, where primary education covers five or six years, Bolivia must achieve the goal considering eight years of primary education, which means that the country must make more efforts - as compared to other countries - to achieve the goal of universal primary education.

The results in terms of primary education are set in the framework of efforts made by the government – with help from the international donor community – to make headway in the Educational Reform process.¹²

With regard to health, the health programs and policies have focused on a reduction of maternal – infant mortality, the achievement of enhanced coverage in terms of the medical health care insurance within the framework of a decentralized expenditure system and the development of specific programs to cope with the principal transmittable diseases and existing vector transmitted diseases in Bolivia (Malaria, Chagas, Tuberculosis), under the Epidemiological Shield program.¹³

Spending in pensions was the second most important component of social expenditure, which resulted from the transition cost of the Pension Reform implemented as from 1997 being higher than the estimated cost.¹⁴

Thanks to strong support from the international donor community and resources from the HIPC II initiative, it has been possible to increase expenditure in basic sanitation, urbanism and rural development.

The National Emergency Employment Plan (PLANE) was conceived as a program to deal with increasing unemployment as a consequence of the economic crisis, by means of supporting programs, projects or activities for public benefit, thereto funding labor. PLANE funds come from external sources and are a temporary measure.¹⁵

With respect to the composition of social expenditure, a higher proportion is destined to current expenses, and within the latter, the most important items are salaries in the sectors of Education and Health and retirement pensions.

In terms of the social capital expenditure, the most important item covers public investment projects associated with rural development and the creation of infrastructure for education.

¹² Results on achievements in education in Bolivia can be found in the document titled: “Education in Bolivia: Indicators, Numbers and Outcomes”. Ministry of Education. 2004.

¹³ A detailed overview of the programs and results thereof can be found in the study “Reform of the Health Sector in Bolivia: Analysis in the Context of Decentralization”. World Bank, 2004.

¹⁴ The government has set up a Special Technical Commission to analyze the current cost of pensions and to propose alternatives to either reduce the cost or find funding sources that do not endanger sustainability of the deficit. The World Bank is supporting this commission, developing a model to estimate the transition cost of the Reform.

Details on the causes of the higher cost of the Pension Reform can be found in the working paper “Simulating the Costs of the Pension Reform in Bolivia”. Leslie Martín. World Bank. 2004

¹⁵ The PLANE supports the creation or maintenance of basic infrastructure works, thereto granting resources to cover salaries. As these salaries covered with PLANE resources are for works, this program was maintained as a capital expense.

Table N° 2
Composition of Social Expenditure
(In percentage of GDP)

	1999	2000	2001	2002	2003 (p)
Current Social Expenditure	12.1	12.3	13.8	14.5	14.3
Health	2.8	2.8	3.1	3.0	3.2
(of which salaries)	1.1	1.1	1.3	1.4	1.5
Education	5.3	5.1	5.9	6.5	6.3
(of which salaries)	3.1	3.0	3.3	3.7	3.9
(of which Universities)	1.5	1.6	1.7	1.9	1.9
(of which TGN resources – Universities)	0.7	0.7	0.7	0.7	0.9
Pensions (1)	3.7	4.1	4.5	4.6	4.5
Others (2)	0.3	0.3	0.3	0.3	0.3
Social capital expenditure	4.4	4.7	5.5	5.8	4.8
Health	0.5	0.7	0.6	0.8	0.6
Education	0.9	1.0	1.4	1.5	1.1
Basic Sanitation	1.2	1.1	0.9	0.6	0.5
Urbanism	0.6	0.6	0.8	0.8	0.7
Rural Development	1.2	1.3	1.7	1.7	1.5
Of which Community Roads	0.5	0.5	0.7	0.8	0.7
Multisectoral	0.0	0.0	0.0	0.0	0.1
PLANE	0.0	0.0	0.0	0.4	0.3
Total Social Expenditure	16.5	17.0	19.3	20.2	19.1

Source: Prepared on the basis of information from the UPF.

(1) Does not include public sector contributions to AFPs

(2) Includes public sector contributions to AFPs and the “Social Management Expenditure” of Prefectures

(p) Preliminary

2. EQUITY IN PUBLIC SOCIAL EXPENDITURE

As we will see in this chapter, the principal finding of this study is that public social expenditure - excluding pensions – mostly benefits the poor population. However, based on an analysis of the different components of social expenditure, it is possible to have a better idea of the level of equity. It is important to discuss this aspect and take it into account in resource allocation criteria, particularly within the framework of the strong budget restrictions in the public sector.

In other words, in the discussions on the overall budget of the nation, the component of progressivity or regressivity of public social spending should be one of the key elements to decide on expenditure policies.

2.1 Equity in Current Expenditure

2.1.1 Overall Outcomes

In general terms, when pensions are included, on an aggregated basis current public social expenditure benefited more non-poor than poor households in 2002 (54% versus 46%).¹⁶ But if pensions are excluded, then social expenditure benefited more poor households as compared to non-poor households (60.4% versus 39.6%).

¹⁶ The overall equity of current expenditure is simply an aggregation of poverty-related equity estimates for education, health and pensions. The estimates excluded the category of contributions to AFPs, as these do not form part of the retirement pension of pensioners as well as the information on social expenditure of municipalities and prefectures, as no information is available on the destination of these expenses.

If a comparison is made with the year 1999, then there is a visible trend towards increasing equity in the expenditure in education and health, as a higher proportion of the current expenditure in both sectors favored poor households.

Table N° 3
Equity in Current Social Expenditure
(In percentage)

Type of Expenditure	1999			2002		
	Poor	Non-poor	Total	Poor	Non-poor	Total
Education (1)	58.1	41.9	100	60.6	39.4	100
Health (2)	56.9	43.1	100	60.1	39.9	100
Subtotal	57.7	42.3	100	60.4	39.6	100
Pensions (2)	n.a.	n.a.	n.a.	17	83	100
Total	n.a.	n.a.	n.a.	46.1	53.9	100

Source: Own elaboration based on information from UPF, INE, VIPFE, and the Ministry of Education

(1) Numbers from the Ministry of Education and UPF

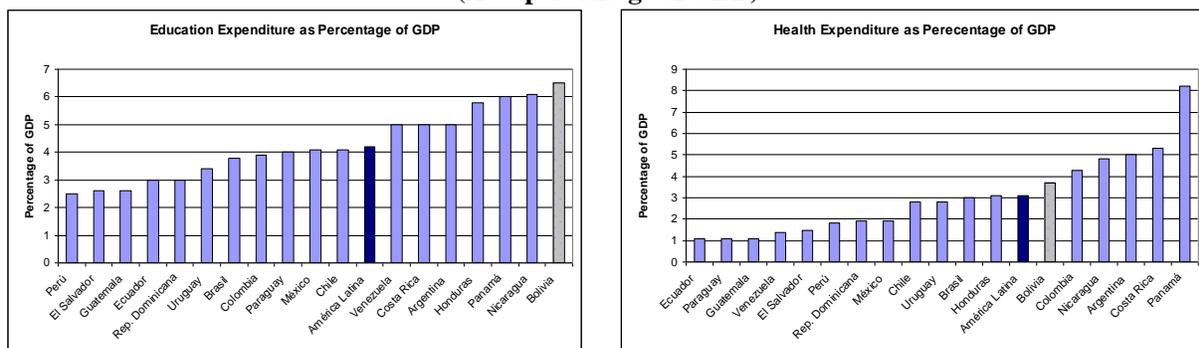
(2) Numbers from the UPF

n.a. Not available

In 2002, the poor households were the ones that benefited most from public expenditure, with 61% of current social expenditure. In health, a similar situation can be seen as 60.1% of current expenditure in health benefited the poor population.

In the Latin American context, Bolivia is the country that destines most resources, as a percentage of GDP, to education. On the other hand, Bolivia occupies an average position as regards efforts in terms of health.

Graph N° 5
Latin America: Public Social Expenditure in education and health in Latin America 2000-2001
(As a percentage of GDP)



Source: Panorama of Social Expenditure in Latin America. ECLAC. 2003.

The expenditure in pensions mainly benefited pensioners from non-poor households (83% in 2002).

The expenditure in pensions is the result of an obligation the State assumed as a consequence of the pension reform.¹⁷ The impact on public expenditure is still being

¹⁷ The Pension Reform consisted in changing from a pay-as-you-go system to an individual accounts system. This conversion implied that the State assumed the cost of the transition to pay pensions under the old system, without benefiting from active contributors. (Leslie Martín: Simulating the Cost of the Pension Reform in Bolivia. Working paper. World Bank. 2004).

analyzed, because after the reform governments have taken measures that affect the cost of the reform and that have given rise to an increase of public spending in pensions as compared to original estimates.

Therefore, it is necessary to take into account that the expenditure the public sector incurs in this sense is not linked to social policies in terms of poverty reduction, but to a financial obligation the State assumed with the people who contributed to the former pension system.

Hence, the expenditure in pensions corresponds to pensions the State pays to pensioners who contributed to the then existing pension system in their labor life. It is therefore to be expected that the people who receive pensions are not in the category of poor people as they probably receive a pension that reflects the salary they perceived in the last years of their active life, which was in most cases above the poverty line.¹⁸

2.1.2 Outcomes from Different Components of Current Social Expenditure

2.1.2.1 Equity in Expenditure in Education

In every component of expenditure in education, except for higher university education, poor households are the ones that benefit most from public spending in education. Only 32% of the expenditure destined to higher education benefited students from poor households.¹⁹

From the perspective of the incidence of public expenditure in terms of equity²⁰, the results are important, taking into account that the unequal access to educational opportunities later gives rise to inequality in the income distribution (Public Expenditure Management - PEM. 2004 World Bank - IDB).

¹⁸ This topic will be considered more thoroughly in another part of the document.

¹⁹ The possibilities of poor students having access to university are lower as compared to non-poor students, taking into account that the student from a poor household is obliged to join the labor market to contribute to the household income and therefore often does not even finish the complete school cycle (primary and secondary school). This means that the process to reach higher education in itself is excluding.

²⁰ Numbers on education from the UPF are not disaggregated per level of instruction; therefore, numbers from the Ministry of Education were taken for initial, primary, secondary and alternative education. However, when aggregated, these numbers do not coincide with UPF numbers. One of the recommendations of this study is for the UPF, with support from the General Accountancy Direction of the State and the Ministry of Education, to disaggregate the information on education, considering levels of instruction. This would also enhance the conciliation of numbers.

Table N° 4
Equity in Expenditure in Education
(In million USD and in percentage)

Level of instruction	Non-poor		Poor		Total Expenditure per Level		Structure (%)	Expenditure per student (in USD)
	Expenditure	%	Expenditure	%	%	Total Expenditure		
1999								
Initial	3.6	27.4	9.6	72.6	100	13	3.3	70.5
Primary	49.1	23.7	158.1	76.3	100	207	51	131.3
Secondary	16.3	36	29.0	64	100	45	11.2	132.8
Alternative *	5.9	48.1	6.4	51.9	100	12	3	398.4
Higher University	95.3	74.4	32.9	25.7	100	128	31.6	658.9
Total	170.3	41.9	236.0	58.1	100	406	100	174.2
2002								
Initial	3.9	28.7	9.8	71.3	100	14	2.9	68.3
Primary	55.9	23.1	186.0	76.9	100	242	51.1	140.9
Secondary	20.1	36.1	35.7	63.9	100	56	11.8	125.8
Alternative *	4.6	37.4	7.7	62.61	100	12	2.6	282.8
Higher University	101.1	67.7	48.3	32.3	100	149	31.6	621.4
Total	185.7	39.4	287.5	60.6	100	473	100	178.8

Source: Own elaboration based on information from the Ministry of Education.

Note: The expenditure in universities comes from the UPF and in other levels from the Ministry of Education.

(*) Considers Primary Adult Education (PAE)

On the other hand, in 2003, the per capita public resource spending destined to university education is almost 5 times higher than that destined to secondary education and 4.4 times than that destined to primary education.

The analysis made in the study “Public Expenditure Management for Fiscal Sustainability and Equitable and Efficient Public Services” (PEM), by the World Bank and IDB provides a series of conclusions regarding the allocation of resources in education that are worth underlining, simultaneously taking into account aspects on equity and efficiency. According to results presented in that study, it is clear that efficiency and equity in public resource allocation are an issue in Bolivia, when considering primary and secondary education versus higher education.

Table N° 5
Equity and Efficiency of Public Expenditure in Education in Bolivia

	PRIMARY	SECONDARY	HIGHER
Efficiency Indicators			
Social Rate of Return			
Low-income Countries	21.3	15.7	11.2
Latin American Countries	17.4	12.9	12.3
Equity Indicators			
Public Expenditure in Education			
Benefiting the poor Population (%)	76.9	63.9	32.3
Benefiting the Non-poor Population (%)	23.1	36.1	67.7

Source: Prepared on the basis of information from the study “Public Expenditure Management For Fiscal Sustainability and Equitable and Efficient Public Services”, World Bank, and information from the Ministry of Education and the MECOVI survey.

Results in low-income countries and Latin American counties show that the social rate of return²¹ is higher in primary and secondary education than in university education: hence,

²¹ The income an individual perceives depends on his level of education. But, as a result of the education of individuals, there are positive externalities for society; therefore, if these externalities are included, the social rate of return could be higher than the private rates of return (Returns to

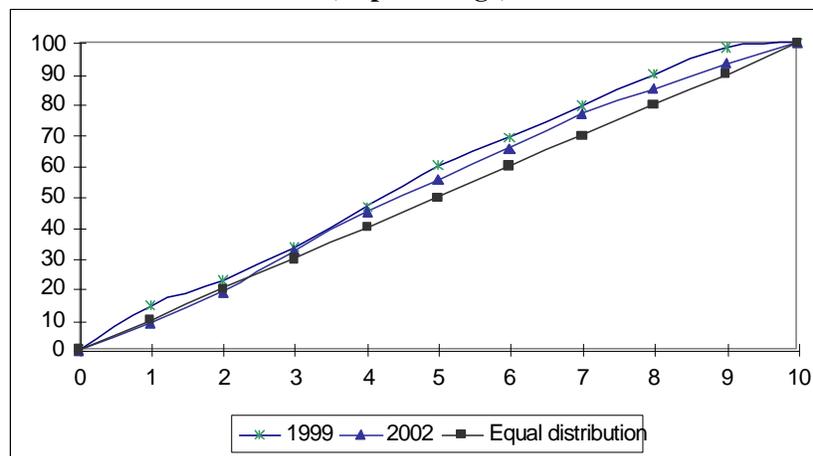
using these social rates of return as a parameter to allocate the expenditure in education, the resources destined to primary and secondary education should be a priority in yearly budget discussions. In the case of Bolivia, this priority is complied with for primary education, but not for secondary education, as higher education is being benefited with a higher and growing public resource allocation in relation to secondary education.

If the efficiency issue is complemented with equity, a distortion is also observed in this sense, as in the case of university education, a high proportion of students from non-poor households are benefited²².

2.1.2.2 Equity in Expenditure in Initial Education

In Initial Education, public expenditure mainly benefits poor households (73% in 1999 and 71% in 2002) and data in the graph below show a progressive incidence as a higher percentage of expenditure at this level is concentrated in the first 4 deciles (48% in 1999 and 46% in 2002).²³

Graph N° 6
Distribution of Expenditure in Initial Education according to Income Deciles
(In percentage)



Source: Own elaboration based on information from the Ministry of Education

However, it is important to underline that at the initial level, according to the Ministry of Education, “access is still low as only one quarter of the children between 4 and 5 years

Investment in Education: A Further Update. George Psacharopoulos and Harry Patrinos. Working Paper. World Bank. 2002).

²² However, there are various other aspects of which the PEM says that they must be corrected, specifically those related to the quality of secondary education, which will be discussed below.

²³ The vertical axis measures the accumulated percentage of the expenditure in initial education and the horizontal one the income deciles. The diagonal line shows that every income decile receives a similar proportion of the expenditure; hence, if the distribution curve of the accumulated expenditure per deciles is above the diagonal line, then expenditure is progressive, i.e. the lower deciles receive a higher proportion of expenditure. The limit between poor and non-poor households is between the seventh and eighth deciles.

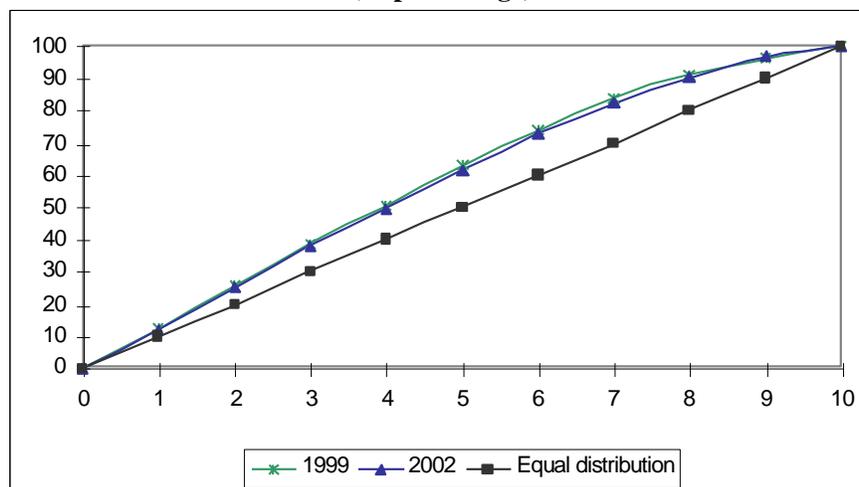
old attend initial schooling, probably because of the limited availability of schools, teachers and the low level of understanding on behalf of society of the importance of initial schooling for performance in the next educational levels". (Education in Bolivia: Indicators, Numbers and Outcomes, 2004).

2.1.2.3 Equity in Primary Education

In primary education, the poor population also benefits most from this service provided by the public sector, with a progressive trend. In 1999, 76.3% of the expenditure in primary education benefited students from poor households, in 2002, this percentage increased to 76.9%.

On the other hand, at the income decile level, it is clear that the expenditure in primary education is concentrated in the first 4 poorest deciles (50% of the expenditure in 2002 and 48% in 1999).

Graph N° 7
Distribution of the Expenditure in Primary Education according to Income Deciles
(In percentage)



Source: Own elaboration based on information from the Ministry of Education

According to the analysis in the PEM, this progressivity was an expected result, which is explained by the fact that primary education in Bolivia is open to all and free. On the other hand, the highest-income households prefer to send their children to private schools, where they can better control the quality and continuity of the education of their children.²⁴

Moreover, this study also says that although Bolivia is about to achieve the universal primary education goal, there are still municipalities where access to primary education continues to be low, because of their serious isolation.

²⁴ This aspect should be underlined as it shows education as an element that could perpetuate existing inequalities, because the low-income households that enroll their children in state schools do not have the same possibility of demanding quality in the education of their children.

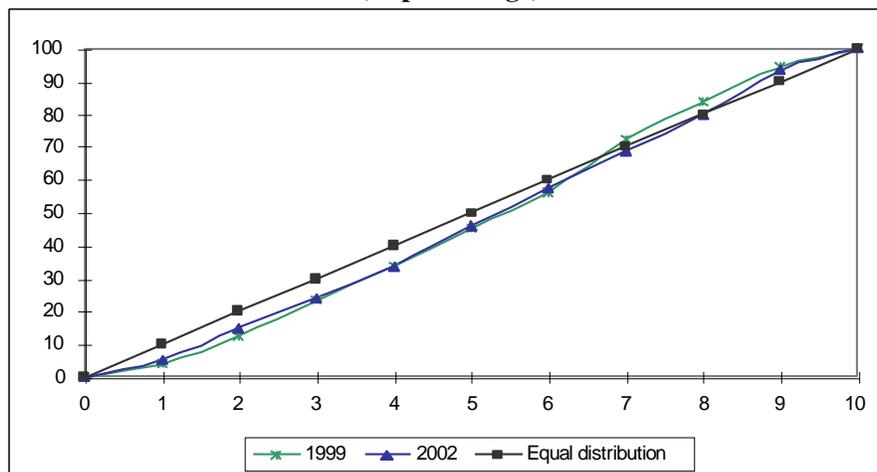
Besides and from another perspective, the Ministry of Education says that problems regarding school desertion during the school year and learning at school are prevailing issues in primary education.²⁵

The previous aspects show that although public spending in primary education is pro-poor, there are still some equity issues (in terms of isolated municipalities where access to primary education is still low), as well as quality issues. Hence, maintaining the emphasis on achieving universal primary education, these two issues should also be tackled.

2.1.2.4 Equity in Higher Education

Although public expenditure in secondary education mainly benefits students from poor households (64% in 1999 and 2002), at decile level there is a regressive trend in distribution of the expenditure because among the poor households, the households in the lowest-income deciles are the ones that benefit the least from the expenditure in secondary education. Students coming from the households in the four poorest deciles benefited from the expenditure in education in 33.6% in 1999 and in 33.7% in 2002.

Graph N° 8
Distribution of the Expenditure in Secondary Education according to Expenditure Deciles
(In percentage)



Source: Own elaboration based on information from the Ministry of Education

On the other hand, and from the perspective of expenditure, the PEM states that, in spite of the strong growth in secondary enrollment (41% between 1997 and 2002), one of the most acute problems of public expenditure in Bolivia, is the low amount of resources channeled to secondary education.²⁶

²⁵ The Ministry of Education says that school desertion in the first and seventh grades of primary school is high. (Education in Bolivia: Indicators, Numbers and Outcomes).

²⁶ According to the PEM, Bolivia destines only about one third to secondary education of the expenditure other developing countries destine to this level.

On the other hand, the Ministry of Education mentions that there are also problems related to the quality of secondary education, as students show low levels of performance in language, comprehension and mathematics.²⁷

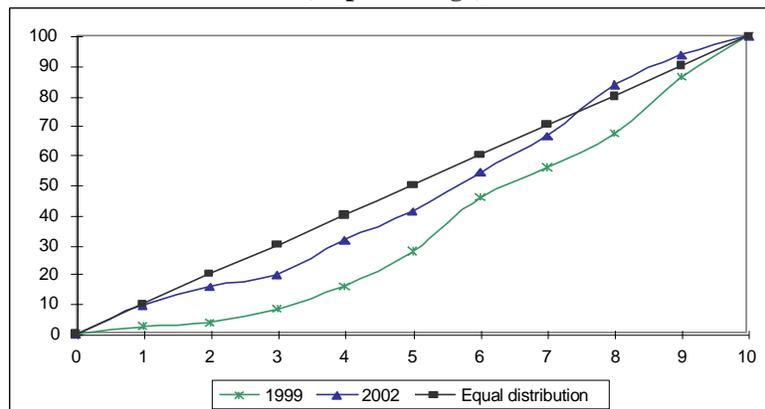
Therefore, besides improving equity in public expenditure at the level of secondary education, the State must focus on increased efficiency in the use of public resources, destining a higher amount to this level of instruction, and improving the quality of secondary education.

2.1.2.5 Equity in Alternative Education

In 2002, 62.6% of alternative education²⁸ benefited students from poor households, and the equity of public expenditure at this level of instruction is higher as compared to 1999 (51.9%).

At decile level, there is a regressive trend of the public expenditure, even though at this level, in 2002 the situation was less pronounced as compared to 1999 as the 4 lowest deciles benefited from higher amounts of public expenditure (32% versus 15%).

Graph N° 9
Distribution of the Expenditure in Alternative Education according to Income Deciles
(In percentage)



Source: Own elaboration based on information from the Ministry of Education

Nonetheless, the study on Education in Bolivia of the Ministry of Education states that even though enrollment in adult education increased significantly (from 81,480 students in 1999 to 120,780 in 2002), there are difficulties to make headway in this level of instruction.

²⁷ According to the Ministry of Education, results of the Academic Aptitude Test in 2001 show that only nearly one third of young people have a high level of vocabulary and syntax and a little less than half of the students in reading comprehension. In mathematics, only one third of the students show a high performance in geometry, algebra and applied statistics.

²⁸ Alternative education focuses on the completion of education for persons and on enabling access to education for the people who, because of their age, exceptional physical and mental conditions, did not start or conclude their studies in formal education. Alternative education in Bolivia is divided into three big areas: adult education, special education and permanent education. (Excerpted from the document “Education in Bolivia: Indicators, Numbers and Outcomes, Ministry of Education, 2004).

These difficulties are related to training of facilitators, deficiencies in study plans, budget allocation, a lack of teacher training schools, a shortage of teachers, etc.

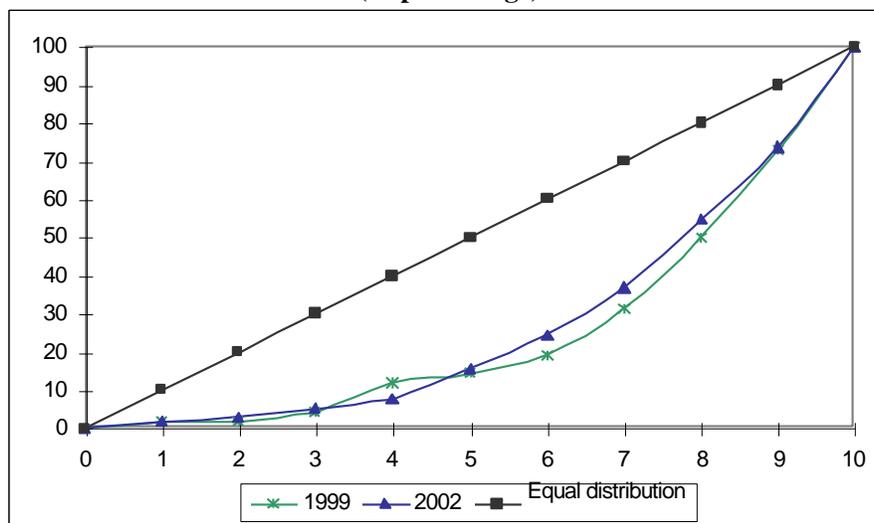
Hence, although public expenditure in alternative education mainly benefits the poor, there are problems regarding quality of the expenditure and a lack of budget.

2.1.2.6 Equity in University Education

It was said already that public expenditure in university education in Bolivia increased to very high levels. In 1995, this level accounted for 26% of public expenditure in education, while in 2003 that percentage rose to 30%. But this increase benefited students from non-poor households.

Only 11.7% of the expenditure in higher education in 1999 benefited students living in households in the first four poorest income deciles, and only 7.6% in 2002.

Graph N° 10
Distribution of Expenditure in Higher Education according to Expenditure Deciles
(In percentage)



Source: Own elaboration based on information from the Ministry of Education and UPF

As was mentioned before, besides equity issues, the expansion of state universities in Bolivia in a context of strong budget restrictions did not take place within the framework of a discussion on priorities in the field of resource allocation in the educational system as a whole. This is probably one of the principal discussions that should be held when discussing the General Budget of the Nation and allocating resources to the educational system.

2.1.3 Equity of Social Expenditure in Health

In the case of health care expenses, equity was measured by distributing the expenditure based on the poverty condition of the households of which the person who was attended

in a state health care facility forms part. The result obtained this way shows that 57% of the expenditure in health benefits people from poor households.²⁹

Table N° 6
Equity in the Expenditure in Health

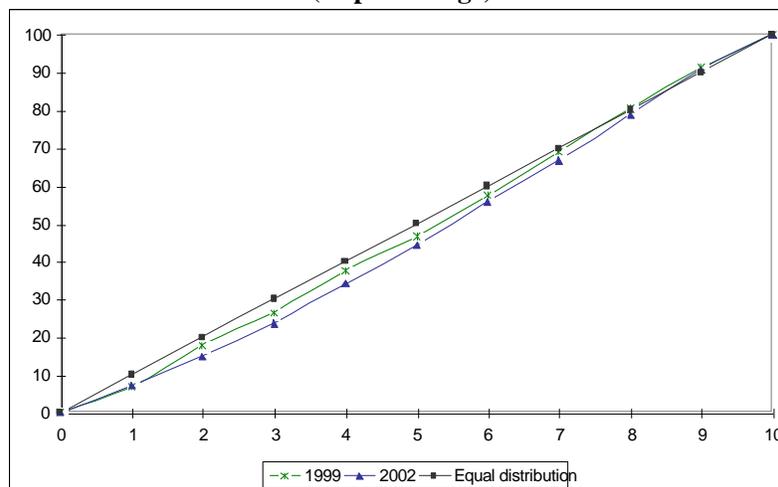
Category	Non-poor	Poor	Total
1999			
Number of Attended Persons	2,489,412	3,289,884	5,779,296
Structure	43.1	56.9	100
Expenditure (In million USD)	85	112	197
2002			
Number of Attended Persons	2,249,616	3,382,752	5,632,368
Structure	39.9	60.1	100
Expenditure (In million USD)	101	151	252

Source: Own elaboration based on information from MECOVI 1999- 2002 and UPF

On the other hand, when the expenditure in health is disaggregated according to income deciles of the household to which the attended person belongs, it becomes clear that although public expenditure in health benefited more persons of poor households, the distribution was less favorable for households in the lowest (poorest) income deciles.

The four poorest deciles were benefited with 37.5% of the expenditure in health in 1999 and 34.2% in 2002.

Graph N° 11
Distribution of Current Expenditure in Health, measured in terms of Medical Attendance in State Hospitals, according to Poverty of the Attended Person (In percentage)



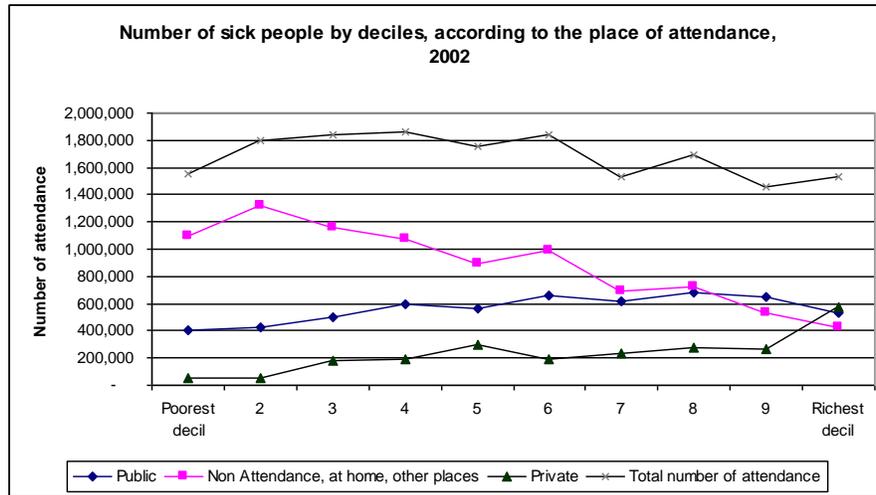
Source: Own elaboration based on information from MECOVI 1999- 2002 and UPF

On the other hand, complementary information from the MECOVI survey with respect to the number of provided attendances, shows that cases of “not attended”, “attended at home” or “in another place” are concentrated in poor households, which can be interpreted in the sense that poor households have less access to public health care services.

²⁹ See Annex on Methodology for further explanations.

The number of attendances is higher in the lower deciles, which shows that the probability of diseases or accidents in the lowest deciles is higher as compared to the higher deciles. This is because the poorest people are normally more exposed to higher risks for their health.

Graph N° 12
Number of Attendances, according to the place of attendance
(In number of attendances)



Source: Own elaboration based on information from the MECOVI survey 2002

2.1.4 Equity in Social Expenditure in Pensions

If the poverty condition of the households to which the pensioner belongs (information obtained from the MECOVI survey) is assumed as an approximation to measure the incidence of public expenditure in pensions, the deduction is that most of the social expenditure in pensions (83%) is destined to people from non-poor households. This result was to be expected, taking into account that the average value of the pension pensioners receive, exceeds the poverty line value (Bs. 1,096 versus Bs. 322 in the urban area and Bs. 233 in the rural area rural³⁰) and that, in general, in case the pensioner does not live alone (for example, if (s)he lives with his/her children or relatives), his/her income forms part of the household income.

³⁰ The poverty lines used are the ones calculated by UDAPE. See annex.

Table N° 7
Distribution and expenditure in pensions according to the poverty situation of
the pensioner's household 2002
(In million dollars and in percentage)

Category	Non-poor	Poor	Total
Retirement	84.15	15.85	100
Disability	88.24	11.76	100
Widowhood	76.63	23.37	100
Retirement and widowhood	100.00	-	100
Orphanhood	100.00	-	100
Total	83.04	16.96	100
Expenditure in Pensions, assuming the poverty condition of the pensioner's household (In million USD)	276	53	333

Source: Own elaboration based on MECOVI 2002 and UPF

If the expenditure in pensions is broken down into income quintiles³¹ of the household to which the pensioner belongs, then it becomes clear that most pensioners live in households located in the higher or wealthiest quintiles.

Table N° 8
Expenditure in pensions according to the Income Quintile of the Household of which the
Pensioner forms part
(In percentage)

Quintile	%	Accumulated %
Quintile 1 (poorest)	10.0	10.0
Quintile 2	13.0	23.0
Quintile 3	14.0	37.0
Quintile 4	24.0	61.0
Quintile 5 (wealthiest)	39.0	100.0
Total	100.0	

Source: Own elaboration based on MECOVI 2002 and UPF

Nonetheless, in the lowest quintiles, the level of dependency of the household income on the pensioner's income is higher than in the highest quintiles. This suggests that the pensioner continues to be the head of the family (i.e. the household depends on his income) or that the other members of the household – even those who can still work considering their age – cannot find a job or they work but their average salary is very low.

Table N° 9
Degree of Dependency of the Household Income with respect to the Pensioner's Retirement
Income

Quintile	Number of households	Average number of household members	Average number of income perceivers (1)	Average number of pensioners per household	Average household income (In Bs./month)	Average income from pensions (In Bs./month)	Proportion of the household income (In percentage)
Quintile 1	7,301	1.6	0.2	1.0	1059	798	75
Quintile 2	10,560	2.7	0.5	1.0	1301	867	67
Quintile 3	19,099	3.2	0.8	1.0	1542	918	59
Quintile 4	24,519	4.1	1.2	1.1	2279	1,062	47
Quintile 5	43,008	4.5	1.3	1.2	4719	1,571	33

Source: Own elaboration based on MECOVI 2002

(1) Except pensioners

³¹ Considering characteristics of the sample, quintiles instead of deciles were used.

2.2 Execution of Social Capital Expenditure

The expenditure decentralization policies implemented as from the Popular Participation Law and the Decentralization Law, as well as the Dialogue Law 2000 for the distribution of HIPC II resources (which used to be destined to payment of the foreign debt service) to municipalities, have provided municipalities with more resources for investment.

Most of the social capital spending is destined to public investment projects executed in the municipalities (73% of the total capital expenditure in 2003), followed by multimunicipal investment projects (projects benefiting two or more municipalities). Besides, there is the so-called national category for public investment projects benefiting the country as a whole.

At the municipal level, the public investment projects are mainly destined to Education, Urbanism and Rural Development. The national projects concentrate on education and to a lesser extent on Rural Development and Health. Finally, the multimunicipal projects mostly focus on Rural Development and Health.

The multisectoral social expenditure category corresponds to a series of projects executed at the municipal level with HIPC resources that do not correspond to any other category of social capital expenditure, such as territorial organization, citizen safety, environment, ethnias, gender and others. The participation of these areas in the composition of social expenditure is little significant (0.06% of GDP in 2003).

Table N° 10
Social Capital Expenditure according to expenditure groups
(As a percentage of GDP)

Category	2001				2002				2003 (e)			
	Nat.	Multim.	Mun.	Total	Nat.	Multim.	Mun.	Total	Nat.	Multim.	Mun.	Total
Health	0.01	0.16	0.46	0.63	0.07	0.24	0.46	0.77	0.06	0.26	0.28	0.60
Education	0.54	0.18	0.67	1.38	0.31	0.05	1.09	1.45	0.20	0.04	0.87	1.12
Basic Sanitation	0.00	0.07	0.88	0.95	0.01	0.04	0.60	0.64	0.01	0.01	0.49	0.51
Urbanism	0.03	0.04	0.76	0.83	0.02	0.01	0.81	0.84	0.02	0.00	0.71	0.73
Rural Development	0.05	0.55	1.08	1.68	0.03	0.62	1.03	1.68	0.04	0.65	0.83	1.52
o/w Community Roads	0.00	0.15	0.59	0.74	0.00	0.43	0.37	0.80	0.00	0.43	0.28	0.71
Multisectoral	0.00	0.00	0.01	0.01	0.00	0.00	0.05	0.05	0.00	0.00	0.06	0.06
PLANE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.28	0.28
Total	0.63	1.00	3.85	5.48	0.43	0.97	4.03	5.78	0.33	0.96	3.52	4.81
Percentage of Capital Expenditure	11.50	18.25	70.25	100	7.44	16.78	69.72	100	6.86	19.96	73.18	100

Source: Prepared on the basis of information from the UPF and VIPFE.

(e) Estimate

2.2.1 Social Capital Expenditure and Poverty

In the last three years, a growing proportion of the social capital expenditure identified at the municipal level (i.e. excluding national multimunicipal and departmental multimunicipal capital expenditure) has been destined to municipalities with a UBN index that is higher than the national UBN index (58.6%).³²

Table N° 11
Distribution of Social Capital Expenditure in Municipalities according to their Level of Poverty (UBN)
(In percentage)

Category	Number of Municipalities	2001			2002			2003(p)		
		%	Accumulated %	Population	%	Accumulated %	Population	%	Accumulated %	Population
Municip. with UBN between 100-90	162	15.3	15.3	1,714,193	17.2	17.2	1,737,075	17.1	17.1	1,759,829
89.9-80	66	8.2	23.5	1,025,811	10.0	27.2	1,045,535	12.6	29.7	1,065,392
79.9-70	29	3.7	27.2	369,213	5.6	32.9	374,546	4.1	33.7	379,892
69.9-60	18	4.5	31.7	956,835	5.0	37.8	992,133	9.6	43.3	1,028,290
59.9-50	17	9.7	41.4	758,695	8.7	46.5	764,492	7.8	51.1	769,990
49.9-40	12	8.5	49.9	486,780	5.6	52.1	508,998	6.5	57.5	532,220
39.9 and less	10	20.4	70.3	3,116,263	17.6	69.7	3,201,493	15.7	73.3	3,288,133
Total Municipalities	314	70.3	70.3	8,427,790	69.7	69.7	8,624,272	73.2	73.2	8,823,746
National		11.4	81.7		7.4	77.1		6.9	80.1	
Multimunicipal		18.3	100		16.8	93.9		19.9	100	
PLANE		0	100		6.1	100		0	100	

Source: Own elaboration based on information from UPF, INE, PLANE

(p) Preliminary

(1) For the year 2003, the PLANE is included in expenditure at the municipal level.

In 2001, 70.3% of the capital expenditure was executed at the level of municipalities, 45% of which in municipalities with a UBN index above the national UBN index. In 2002 and 2003, these percentages rose to 70% and 54%, and 73% and 59%, respectively.

Adjusting – for every UBN category of municipalities – social capital expenditure in terms of the per capita average, it is possible to compare the relative efforts of the public sector to decrease disparities in the provision of social infrastructure. Considering this aspect, it is clear that the per capita social capital expenditure in the relatively poorest municipalities (with UBN indices under the national UBN index) is higher as compared to the municipal per capita average and that the relatively less poor municipalities (with a UBN index above the national UBN index) show a lower per capita expenditure pattern.

³² The higher the UBN percentage, the poorer the municipalities. For practical reasons, the assumption is that municipalities above the national UBN index are those in the range of 100-60 and those under the national UBN index are those with a UBN index between 59.9 and less.

Table N°12
Social Capital Expenditure in municipalities according to Poverty Level (UBN)

Category	2001		2002		2003(p)	
	Capital Expenditure (Million USD)	Per Capita Expenditure	Capital Expenditure (Million USD)	Per Capita Expenditure	Capital Expenditure (Million USD)	Per Capita Expenditure
Municip. with UBN between						
100-90	66.7	38.9	79.1	45.5	63.9	36.3
89.9-80	35.9	35	46.1	44.1	46.9	44
79.9-70	16.1	43.6	25.9	69.3	15.2	40
69.9-60	19.7	20.6	22.9	23.1	35.9	34.9
59.9-50	42.4	55.9	39.8	52.1	29	37.6
49.9-40	37	76	25.7	50.4	24.1	45.3
39.9 and less	89.3	28.7	81	25.3	58.7	17.8
Total Municipalities	307.2	36.4	320.5	37.2	273.7	31
National	49.9		34		25.8	
Multimunicipal	79.9		77.3		74.2	
PLANE	-		28		0	
Total	437		459.8		373.7	

Source: Own elaboration based on information from UPF, INE, PLANE

(p) Preliminary

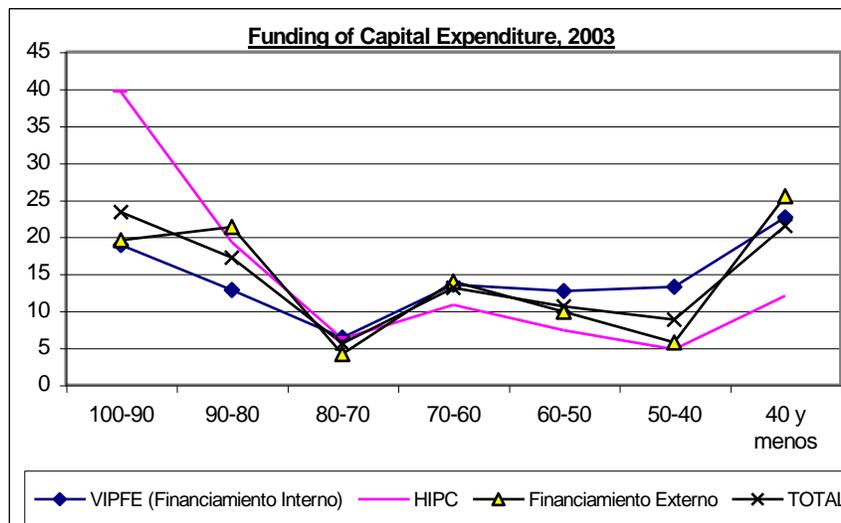
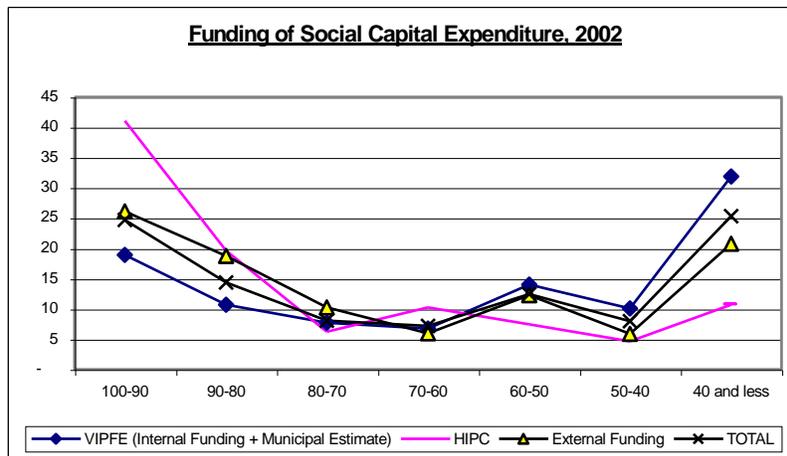
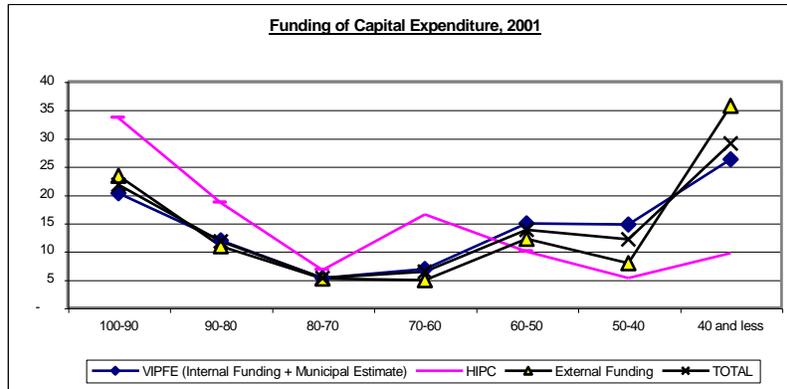
(1) For the year 2003, the PLANE is included in expenditure at the municipal level.

From the point of view of funding sources for social capital expenditure, the following graphs show that the resources are concentrated in the extremes, i.e. the poorest municipalities (UBN between 100 and 80) and the least poor ones (UBN under 40) are the ones receiving the highest proportion of the resources.

External donors tend to distribute their resources in a relatively similar proportion between municipalities with a UBN under the national UBN Index (58.6%) and municipalities with a UBN above the national UBN index.

On the other hand, based on the graphs it is possible to deduct that in 2003, more efforts have been made to achieve more equity in social capital expenditure, as there is a trend of the resources being destined more to municipalities with higher UBN indices.

Graphs N° 13
Distribution of Social Capital Expenditure in Municipalities according to
the Poverty Level (UBN) and Funding Source
(In percentage)



Source: Own elaboration based on information from UPF, INE, PLANE

The HIPC resources have influenced growing equity in social capital expenditure, as a result of the Dialogue Law 2000 that says that 70% of the special account of the dialogue 2000 must be distributed according to the UBN index, that is to say, the poorest municipalities must receive most resources.

Table N° 13
Per Capita Social Expenditure in Municipalities according to the Poverty Level (UBN) and Funding Source
(In USD)

	VIPFE (Internal Funding)	HIPC ⁽¹⁾	External Funding	TOTAL
<i>2001</i>				
<i>Municipalities with UBN between</i>				
100-90	22.51	1.73	14.68	38.92
89.9-80	22.07	1.59	11.37	35.03
79.9-70	26.86	1.59	15.15	43.61
69.9-60	13.55	1.52	5.50	20.57
59.9-50	37.41	1.15	17.31	55.88
49.9-40	57.56	0.96	17.50	76.02
39.9 and less	16.06	0.27	12.33	28.67
<i>2002</i>				
<i>Municipalities with UBN between</i>				
100-90	19.52	13.14	12.85	45.51
89.9-80	18.34	10.43	15.34	44.12
79.9-70	36.78	9.19	23.32	69.28
69.9-60	12.24	5.74	5.13	23.11
59.9-50	32.96	5.42	13.72	52.10
49.9-40	35.46	5.07	9.89	50.41
39.9 and less	17.88	1.86	5.55	25.29
<i>2003</i>				
<i>Municipalities with UBN between</i>				
100-90	12.95	12.58	10.79	36.31
89.9-80	14.45	10.10	19.48	44.04
79.9-70	20.15	9.19	10.65	39.99
69.9-60	15.83	5.86	13.20	34.89
59.9-50	19.78	5.34	12.50	37.62
49.9-40	29.87	5.01	10.45	45.32
39.9 and less	8.27	2.04	7.54	17.85

Source: Own elaboration based on information from UPF, INE, PLANE

(1) Corresponds to resources coming from the Special Account of the dialogue 2000

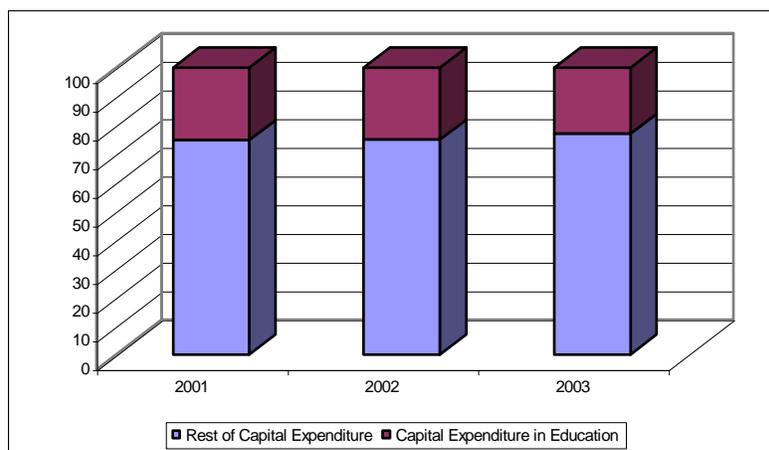
2.2.2 Equity in Social Capital Expenditure in Education

On average, social capital expenditure in education has accounted for 31% of the social capital expenditure between 2001 and 2003, the highest part of which is destined to investment projects benefiting a specific municipality.

The multimunicipal public investment projects in education mainly include the Support Program for Children under 6 (PAN), literacy programs, and technical education in agriculture and livestock.

National public investment projects mainly include teacher training and education, decentralization of educational management, curriculum development, environmental plans and technical assistance.

Graph N° 14
Social Capital Expenditure in Education
(In percentage)



Source: Own elaboration based on information from UPF, INE, PLANE

In the last three years, the expenditure for the creation of infrastructure for education identified at the municipal level has mostly benefited municipalities with a UBN index above the national average; hence, there is more equity in terms of this type of expenditure, as the access to education for children living in the poorest municipalities is improved.

In 2001, 48% of the capital expenditure in education was executed in the municipalities, and 71% of this amount was concentrated in municipalities with a UBN index above the national UBN. In 2002 and 2003, these amounts increased to 75% and 60% and to 78% and 62%, respectively.

Table N° 14
Distribution of Social Capital Expenditure in Education in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003 (p)	
	%	Accumulated %	%	Accumulated %	%	Accumulated %
100-90	16.1	16.1	23.0	23.0	20.5	20.5
89.9-80	9.8	25.9	10.8	33.8	8.4	28.9
79.9-70	3.6	29.5	4.2	38.0	2.2	31.2
69.9-60	4.9	34.4	7.2	45.1	17.3	48.4
59.9-50	3.9	38.3	5.9	51.0	6.7	55.2
49.9-40	2.5	40.8	4.5	55.5	4.2	59.4
39.9 and less	7.4	48.2	19.5	75.1	18.4	77.8
Total Municipalities	48.2	48.2	75.1	75.1	-	-
Total National	38.8	87.0	21.4	96.4	18.5	96.3
Multimunicipal	13.0	100	3.6	100	3.8	100
Total	100		100		100	

Source: Own elaboration based on information from UPF, INE, PLANE

- (1) In million USD
- (2) In current USD
- (p) Preliminary

The increased equity in the capital expenditure in education can be seen also when analyzing the per capita social expenditure in education. In the poorest municipalities

with a UBN above the national UBN index, the per capita index in educational infrastructure projects is the highest.

Table N° 15
Social Capital Expenditure in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003 (p)	
	Total Expenditure in Education ⁽¹⁾	Per capita Expenditure in Education ⁽²⁾	Total Expenditure in Education ⁽¹⁾	Per capita Expenditure in Education ⁽²⁾	Total Expenditure in Education ⁽¹⁾	Per capita Expenditure in Education ⁽²⁾
100-90	17.8	10.4	26.5	15.3	17.5	9.9
89.9-80	10.8	10.6	12.5	11.9	7.1	6.7
79.9-70	4.0	10.6	4.9	13.0	1.9	5.0
69.9-60	5.4	5.6	8.3	8.3	14.7	14.3
59.9-50	4.3	5.8	6.8	8.8	5.7	7.5
49.9-40	2.8	5.7	5.2	10.3	3.6	6.8
39.9 and less	8.2	2.6	22.5	7.04	15.6	4.8
Total Municipalities	53.2		86.6		66.2	
Total National	42.8		24.6		15.7	
Multimunicipal	14.3		4.2		3.2	
Total	110.4		115.4		85.0	

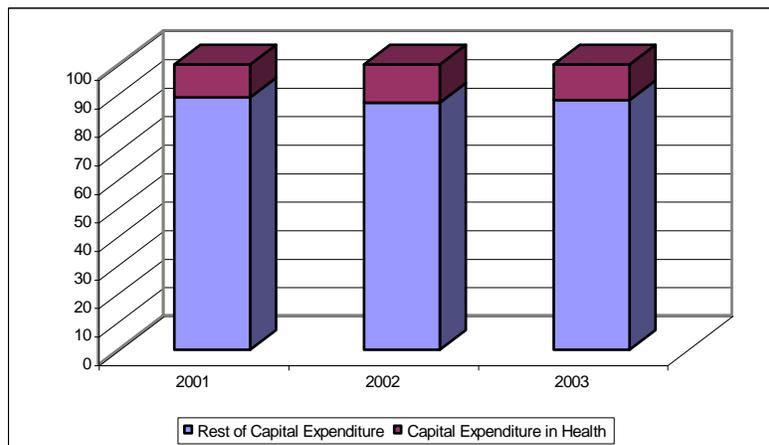
Source: Own elaboration based on information from UPF, INE, PLANE

- (1) In million USD
- (2) In current USD
- (p) Preliminary

2.2.3 Equity of Social Capital Expenditure in Health

On average, the social capital expenditure in health has accounted for 11% of the total social capital expenditure. In 2001 and 2002, most public investment projects were executed in the municipalities. However in 2003, most capital expenditure in health was executed in national and multimunicipal projects. The reason is that in that year, the execution in programs related to the Health Reform, integrated health care projects and food security programs was higher.

Graph N° 15
Social Capital Expenditure in Health
(In percentage)



Source: Own elaboration based on information from UPF, INE, PLANE

The multimunicipal public investment projects include the health care reform, integrated health care programs, hospital equipment and disease control programs. National programs, on the other hand, include the epidemiological shield.

In 2001 and 2002, the expenditure in health care infrastructure mostly benefited the relatively less poor municipalities (with a UBN under the national UBN index). In 2003, the distribution was more equitable, as the relatively poorer municipalities benefited more from capital expenditure in health.

Table N° 16
Distribution of Social Capital Expenditure in Health in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003(p)	
	%	Accumulated %	%	Accumulated %	%	Accumulated %
100-90	11.1	11.1	11.6	11.6	10.4	10.4
89.9-80	9.6	20.7	6.9	18.5	9.1	19.5
79.9-70	3.8	24.5	3.4	21.9	3.0	22.5
69.9-60	5.1	29.6	5.1	26.9	5.4	27.9
59.9-50	12.4	42.0	5.2	32.2	6.1	34.1
49.9-40	8.9	50.9	1.2	33.4	2.4	36.5
39.9 and less	22.4	73.4	26.5	59.9	9.0	45.4
Total Municipalities	73.4	73.4	59.9	59.9	45.4	45.4
National	2.1	75.5	8.6	68.5	10.7	56.2
Multimunicipal	24.6	100	31.5	100.0	43.8	100.0
Total	100		100		100	

Source: Own elaboration based on information from UPF, INE, PLANE

(1) In million USD

(2) In current USD

(p) Preliminary

In 2001, 73% of the capital expenditure in health was executed in the municipalities, and 57% of this amount was concentrated in municipalities with a UBN above the national average; in 2002 and 2003, these amounts amounted to 60% and 54% and to 45% and 75%, respectively.

Table N° 17
Social Capital Expenditure in Health in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003	
	Total Expenditure in Health ⁽¹⁾	Per capita Expenditure in Health ⁽²⁾	Total Expenditure in Health ⁽¹⁾	Per capita Expenditure in Health ⁽²⁾	Total Expenditure in Health ⁽¹⁾	Per capita Expenditure in Health ⁽²⁾
100-90	5.6	3.2	7.1	4.1	4.7	2.7
89.9-80	4.8	4.7	4.2	4.0	4.1	3.9
79.9-70	1.9	5.2	2.1	5.6	1.3	3.6
69.9-60	2.6	2.7	3.1	3.1	2.4	2.4
59.9-50	6.4	8.2	3.2	4.2	2.8	3.6
49.9-40	4.5	9.2	0.7	1.4	1.1	2.0
39.9 and less	11.3	3.6	16.3	5.1	4.0	1.2
Total Municipalities	37.1		36.9		20.7	
National	1.1		5.2		4.9	
Multimunicipal	12.4		19.4		20.0	
Total	50.6		61.6		45.7	

Source: Own elaboration based on information from UPF, INE, PLANE

(1) In million USD

(2) In current USD

(p) Preliminary

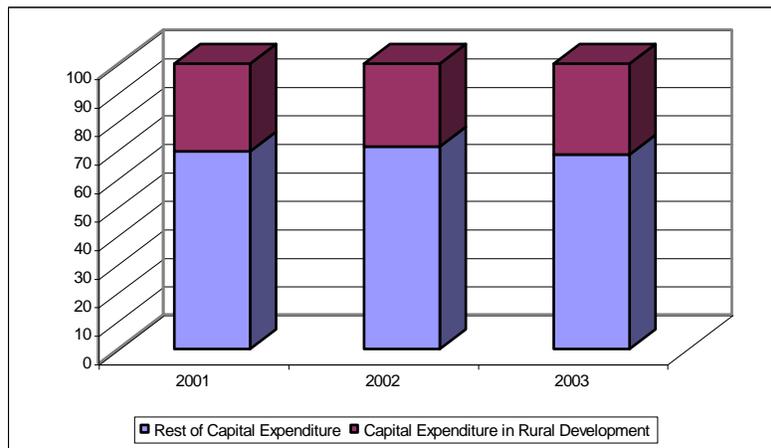
In terms of the per capita capital expenditure in health, the pattern is relatively similar, i.e. in 2003, there is more equity in the distribution of the expenditure in health as compared to the two previous years.

2.2.4 Equity in Social Capital Expenditure in Rural Development

The social expenditure in Rural Development mainly includes public investment projects in electrification, agricultural and livestock development and community roads.

Between 2001 and 2003, the social capital expenditure in Rural Development averaged 30% of the total social capital expenditure. Most of the capital expenditure in Rural Development is executed at the municipal level, and an important percentage of this expenditure is destined to the construction of community roads.

Graph N° 16
Social Capital Expenditure in Rural Development
(In percentage)



Source: Own elaboration based on information from UPF, INE, PLANE

The multimunicipal public investment projects in rural development include programs in support of development strategies, agricultural and livestock programs, road paving and rehabilitation, and rural electrification programs. On the other hand, the national programs include programs for technical assistance in the rural area, road maintenance and transportation plans.

The expenditure in the creation of infrastructure in rural areas has a high equity component, as most of the public investment projects are executed in the poorest municipalities, which is a trend maintained throughout the three analyzed years.

In 2001, 64% of the capital expenditure in rural development was executed in the municipalities, and 60% of this amount was executed in municipalities with a UBN above the national UBN; in 2002 and 2003, these amounts accounted for 61% and 84% and 55% and 84%, respectively.

Table N° 18
Distribution of Social Capital Expenditure in Rural Development in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003(p)	
	%	Accumulated %	%	Accumulated %	%	Accumulated %
100-90	23.5	23.5	24.0	24.0	19.0	19.0
89.9-80	8.1	31.6	14.1	38.1	19.9	38.9
79.9-70	5.1	36.8	10.2	48.3	5.4	44.3
69.9-60	1.7	38.5	2.8	51.1	1.7	46.0
59.9-50	4.6	43.1	2.9	54.0	1.8	47.8
49.9-40	7.3	50.3	3.8	57.8	3.7	51.5
39.9 and less	13.8	64.2	3.3	61.1	3.0	54.5
Total Municipalities	64.2	64.2	61.1	61.1	54.5	54.5
National	2.9	67.1	1.7	62.8	2.6	57.0
Multimunicipal	33.0	100.0	37.2	100.0	43.0	100.0
Total	100		100		100	

Source: Own elaboration based on information from UPF, INE, PLANE

(1) In million USD

(2) In current USD

(p) Preliminary

When analyzing the per capita capital expenditure, it is clear that the per capita expenditure in the poorest municipalities (UBN of 100-90) is several times higher than that registered in the wealthier municipalities (UBN of 40 or less), which shows that the disparities in the provision of rural infrastructure will decrease if this trend is pursued.

Table N° 19
Social Capital Expenditure in Rural Development in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003(p)	
	Total Expenditure in Rural Development (1)	Per Capita Expenditure in Rural Development (2)	Total Expenditure in Rural Development (1)	Per Capita Expenditure in Rural Development (2)	Total Expenditure in Rural Development (1)	Per Capita Expenditure in Rural Development (2)
100-90	31.5	18.4	32.0	18.4	22.2	12.6
89.9-80	10.8	10.6	18.8	18.0	23.4	21.9
79.9-70	6.8	18.6	13.5	36.2	6.3	16.7
69.9-60	2.3	2.4	3.7	3.7	2.0	1.9
59.9-50	6.1	8.1	3.9	5.1	2.1	2.7
49.9-40	9.7	20.0	5.0	9.8	4.3	8.1
39.9 and less	18.5	5.9	4.4	1.3	3.4	1.0
Total Municipalities	86.0		81.6		64.0	
National	3.8		2.2		3.0	
Multimunicipal	44.2		49.6		50.5	
Total	134.1		133.4		117.6	

Source: Own elaboration based on information from UPF, INE, PLANE

(1) In million USD

(2) In current USD

(p) Preliminary

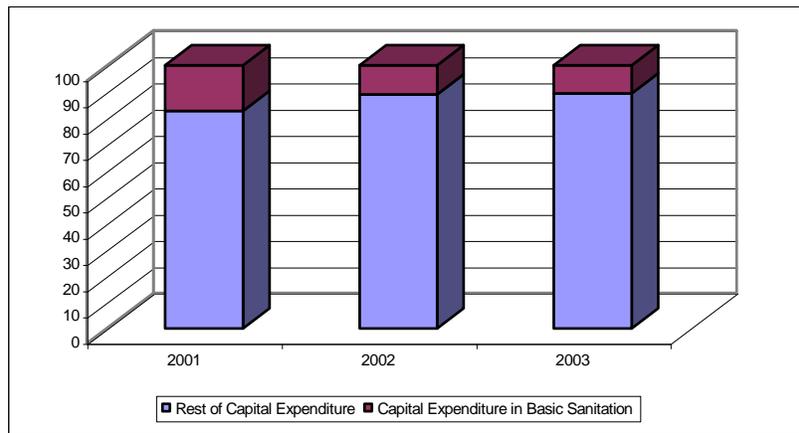
2.2.5 Equity in Social Capital Expenditure in Basic Sanitation

The social expenditure in basic sanitation includes public investment programs and projects in drinking water and basic sanitation, as well as programs related to solid waste collection and disposal.

On average, the social capital expenditure in basic sanitation has accounted for 13% of the total social capital expenditure, and for the most part this expenditure was destined to investment projects benefiting a specific municipality.

The multimunicipal public investment projects include basic sanitation programs, drinking water systems and wells, and sewer systems. On the other hand, the national programs include water information systems and subterranean water development.

Graph N° 17
Social Capital Expenditure in Basic Sanitation
(In percentage)



Source: Own elaboration based on information from UPF, INE, PLANE

In the three analyzed years, the capital expenditure in basic sanitation benefited the relatively less poor municipalities (with a UBN under the national UBN index) to a larger extent. This result can be partly explained by the fact that the relatively wealthier municipalities and the municipalities with a higher population destine an important percentage of their resources to basic sanitation projects. On the other hand, the cost to implement this type of infrastructure is very high in municipalities with a low and disperse population.

In 2001, 93% of the capital expenditure in basic sanitation was executed in the municipalities, and 18.5% of this amount was executed in municipalities with a UBN above the national UBN index. In 2002 and 2003, these amounts rose to 93% and 22% and to 97% and 33%, respectively.

Table N° 20
Distribution of Social Capital Expenditure in Basic Sanitation in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003	
	%	Accumulated %	%	Accumulated %	%	Accumulated %
100-90	9.5	9.5	5.7	5.7	14.1	14.1
89.9-80	3.1	12.7	7.2	12.8	10.4	24.5
79.9-70	4.0	16.7	6.8	19.6	5.0	29.5
69.9-60	0.4	17.1	1.3	20.9	2.7	32.2
59.9-50	15.6	32.7	23.2	44.1	12.5	44.6
49.9-40	9.3	42.0	4.2	48.2	7.9	52.5
39.9 and less	50.7	92.7	45.0	93.3	44.5	97.0
Total Municipalities	92.7	92.7	93.3	93.3	97.0	97.0
National	0.03	92.7	0.8	94.1	1.8	98.8
Multimunicipal	7.3	100.0	5.9	100.0	1.2	100.0
Total	100		100		100	

Source: Own elaboration based on information from UPF, INE, PLANE

- (1) In million USD
(2) In current USD

The higher per capita expenditure in municipalities with a UBN under the national average is related to the fact that the departmental capital cities form part of these municipalities where the highest capital expenditure in basic sanitation is concentrated.

Table N° 21
Social Capital Expenditure in Basic Sanitation in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003	
	Total Expenditure in Basic Sanitation ⁽¹⁾	Per capita Expenditure in Basic Sanitation ⁽²⁾	Total Expenditure in Basic Sanitation ⁽¹⁾	Per capita Expenditure in Basic Sanitation ⁽²⁾	Total Expenditure in Basic Sanitation ⁽¹⁾	Per capita Expenditure in Basic Sanitation ⁽²⁾
100-90	7.2	4.2	2.8	1.6	5.4	3.1
89.9-80	2.4	2.2	3.6	3.4	4.0	3.8
79.9-70	3.0	8.1	3.4	9.2	1.9	5.1
69.9-60	0.3	0.3	0.6	0.6	1.0	1.0
59.9-50	11.8	15.5	11.7	15.4	4.8	6.2
49.9-40	7.0	14.3	2.1	4.1	3.0	5.7
39.9 and less	38.3	12.2	22.8	7.1	17.2	5.2
Total Municipalities	70.0		47.3		37.6	
National	0.02		0.4		0.7	
Multimunicipal	5.5		3.0		0.4	
Total	75.5		50.8		38.8	

Source: Own elaboration based on information from UPF, INE, PLANE

- (1) In million USD
(3) In current USD

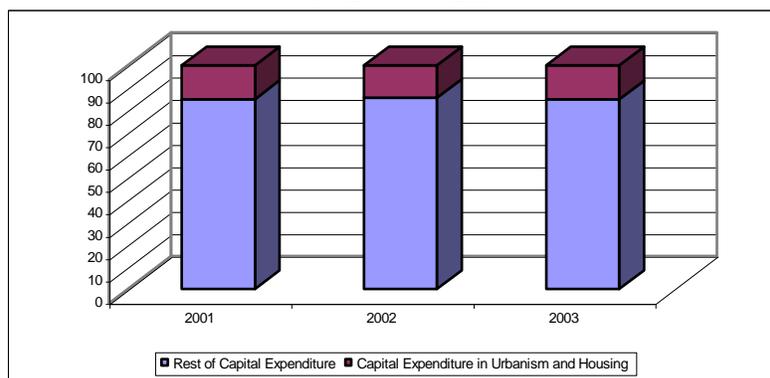
2.2.6 Equity in Social Capital Expenditure in Urbanism

The expenditure in urbanism corresponds to public investment programs and projects related to the creation of urban infrastructure in general.

On average, the social capital expenditure in Urbanism accounted for 15% of total social capital expenditure, and the highest proportion of that percentage is destined to investment projects benefiting a specific municipality.

The multimunicipal public investment projects include progressive social housing programs, sports infrastructure and housing improvement to combat endemic diseases. On the other hand, the national programs mainly support housing policies.

Graph N° 18
Social Capital Expenditure in Urbanism
(In percentage)



Source: Own elaboration based on information from UPF, INE, PLANE

In the three analyzed years, the capital expenditure in urbanism to a larger extent benefited the relatively less poor municipalities (UBN under the national UBN).

In 2001, 92% of the capital expenditure in urbanism was executed in the municipalities; of this amount, 34% was destined to municipalities with a UBN above the national average. In 2002 and 2003, these amounts were 96% and 11% and 97% and 42%, respectively.

Table N° 22
Distribution of Social Capital Expenditure in Urbanism in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003	
	%	Accumulated %	%	Accumulated %	%	Accumulated %
100-90	6.6	6.6	12.4	12.4	7.8	7.8
89.9-80	10.5	17.1	9.4	21.8	6.9	14.7
79.9-70	0.5	17.5	2.7	24.5	3.4	18.1
69.9-60	13.7	31.2	10.4	34.9	22.5	40.6
59.9-50	21.0	52.2	20.9	55.8	19.4	60.0
49.9-40	19.7	71.8	18.4	74.2	18.2	78.3
39.9 and less	19.7	91.5	22.1	96.3	18.7	96.9
Total Municipalities	91.5	91.5	96.3	96.3	96.9	96.9
National	3.3	94.8	2.1	98.4	2.7	99.6
Multimunicipal	5.2	100.0	1.6	100.0	0.4	100.0
Total	100		100		100	

Source: Own elaboration based on information from UPF, INE, PLANE

(1) In million USD

(2) In current USD

However, the highest per capita expenditure in urbanism is registered in the municipalities with a UBN between 70 and 40.

Table N°23
Social Capital Expenditure in Urbanism in Municipalities, according to Poverty (UBN)

Category	2001		2002		2003	
	Total Expenditure in Urbanism and Housing ⁽¹⁾	Per capita Expenditure in Urbanism and Housing ⁽²⁾	Total Expenditure in Urbanism and Housing ⁽¹⁾	Per capita Expenditure in Urbanism and Housing ⁽²⁾	Total Expenditure in Urbanism and Housing ⁽¹⁾	Per capita Expenditure in Urbanism and Housing ⁽²⁾
100-90	4.3	2.5	8.2	4.7	4.3	2.4
89.9-80	6.9	6.7	6.2	6.0	3.9	3.6
79.9-70	0.3	0.8	1.7	4.7	1.8	4.9
69.9-60	9.0	9.4	6.9	7.0	12.6	12.3
59.9-50	13.8	18.2	13.9	18.2	10.8	14.1
49.9-40	12.9	26.6	12.3	24.1	10.2	19.2
39.9 and less	12.9	4.1	14.7	4.6	10.4	3.1
Total Municipalities	60.2		64.3		54.3	
National	2.1		1.4		1.5	
Multimunicipal	3.4		1.0		0.2	
Total	65.8		66.7		56.1	

Source: Own elaboration based on information from UPF, INE, PLANE

(1) In million USD

(2) In current USD

2.2.7 Equity in Social Capital Expenditure in the PLANE

As was mentioned before, the PLANE is a temporary program, aimed at alleviating the increased unemployment that results from the economic crisis. The evaluation of the PLANE I made by Fernando Landa³³ mentions that as this program is an emergency measure it achieved its goal of transferring resources to the poorest people, particularly benefiting women in view of the low salary and practically zero prior training this program required.

Estimates are that in 2003 an amount of nearly USD 21.8 million (8% of social capital expenditure) was destined to PLANE programs, benefiting in a similar proportion poor and non-poor municipalities when the reference used is the national UBN Index (58.6%).

Table N° 24
Social Capital Expenditure in PLANE Programs in Municipalities, according to Poverty (UBN), 2003

<i>Municipalities with UBN between</i>	Expenditure in PLANE (In million USD)	Accumulated expenditure in PLANE (In million USD)	Expenditure in PLANE (In percentage)	Accumulated expenditure in PLANE (In percentage)	Per capita expenditure in PLANE
100-90	5.01	5.01	22.94	22.94	2.85
89.9-80	2.77	7.78	12.68	35.62	2.6
79.9-70	1.19	8.97	5.45	41.07	3.14
69.9-60	2.19	11.16	10.03	51.10	2.13
59.9-50	2.11	13.27	9.66	60.76	2.74
49.9-40	1.42	14.69	6.50	67.26	2.66
39.9 and less	7.14	21.83	32.69	100.00	2.17
Total	21.84		100.00		2.48

Source: Own elaboration based on information from PLANE

³³ “Resource Transfer to the Poorest: An Analysis of PLANE – I with Counterfactual Scenarios”. Fernando Landa. 2003. UDAPE.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

In the Latin American context, Bolivia is one of the countries that make most efforts - in terms of the proportion of GDP and public expenditure itself (fiscal priority) - to destine resources to social expenditure.

Public social expenditure in Bolivia – except for the expenditure in pensions and in universities – benefits the poor population to a larger extent, both in current terms and in capital terms.

The policies focusing a decentralization of expenditure have had a positive effect as they have increased the municipalities' access to resources – especially the poorest ones –, which in turn were able to destine those resources to expenses that contribute to poverty reduction.

In terms of current expenditure, there is a relatively similar equity in the expenditure in education and health. In 2002, 60.6% of the public expenditure in education and 60.1% of the expenditure in health benefited the poor population. The expenditure in pensions rather favors persons living in non-poor households (83% of the total expenditure in pensions).

When analyzing equity in the expenditure in education according to the level of instruction, it becomes clear that public spending is more equitable in initial, primary and secondary education, where a higher proportion of students from poor households are benefited, with more inequity in higher education. In 2002, 74% of the expenditure in initial, primary and secondary education favored students from poor households, in relation to hardly 32% of the expenditure in higher education.

Although the expenditure in non-university education benefits students from poor households to a larger extent, when dividing the households into income deciles, there is a clear trend of progressivity of the expenditure in initial and primary education and of regressivity in secondary and alternative education.

On the other hand, the last public expenditure review the World Bank and IDB made mentions that the secondary school system faces problems related to the sub-allocation of resources. This means that from the perspective of equity in expenditure, the distribution of public resources in the educational system is inefficient, as higher education is being benefited - where public expenditure mainly benefits non-poor households - to the detriment of secondary education, where public expenditure is more favorable for poor households.

The same study says that the social rate of return in less developed countries is higher in primary and secondary education as compared to university education, which means that besides equity issues in the distribution of public resources to the educational system, there are also efficiency issues.

This equity issue – besides issues regarding quality in the different levels of instruction in the Bolivian educational system – must be considered at the moment of discussing the budget for education, taking into account the restrictive framework the public sector faces as regards the availability of resources.

With regard to the expenditure in education, the poor population is benefited to a larger extent, but within this group, the poorest households are not the most benefited ones, which means that the poorest households continue to have problems to access health care services.

As regards the expenditure in pensions, this item is the result of the cost of the transition from the pay-as-you-go system to another system based on individual capitalization. As a result of this reform, the State is obliged to pay the retirement pension of pensioners under the previous system. Therefore, the expenditure associated with this item is not related to poverty reduction policies, but rather to the conversion from one system to another.

However, in the households with at least one pensioner (out of the 1,944,919 households in Bolivia, 104,487 have at least one pensioner), dependency on the pension is relatively high.

In relation to the social capital expenditure identified at the municipal level, in the last three years, on average this expenditure has benefited the poorest municipalities to a larger extent (i.e. municipalities with a UBN index above the national UBN index). In addition, the per capita social expenditure is higher in the relatively poorer municipalities.

Hence, at an overall level, public capital resources benefit the poorest population and as the per capita expenditure is higher in the municipalities with a lower UBN, the conclusion is that the public sector is making efforts in financial terms to reduce disparities in the provision of social infrastructure.

The mentioned results were considerably influenced by the HIPC II resources, coming from the Special Account Dialogue 2000, as the Dialogue 2000 determined that these resources should benefit the relatively poorer municipalities more.

As regards social capital expenditure at the municipal level, there is more equity in rural development and education; besides, these sectors receive a higher proportion of the capital public social expenditure (average of 30% and 25%, respectively, in the last three years).

3.2 Recommendations

The higher or lower level of equity of social expenditure must form part of discussions in public resource allocation. For example, results of this study show that in terms of equity of current expenditure, the impact of one boliviano destined to education and health has a bigger effect on poor households as compared to non-poor households. But the results

also show that within education, the distribution of expenditure is not too efficient, as higher education receives more benefits than secondary education, in spite of the fact that secondary education suffers a lack of resources.

Nonetheless, the evaluation of the level of equity of social expenditure must go hand in hand with an analysis of the efficiency and effectiveness of social expenditure, as studies like the World Bank and IDB PEM as well as other Bolivian public sector studies show that there are also issues related to the quality of public social expenditure, in the sense that in spite of public expenditure having a rather important pro-poor component, the services provided by the public sector show deficiencies, particularly in education and health.

With regard to social capital expenditure, it is important to continue with policies that enhance progressivity in public resource allocation and that also ensure funding sources for public investment. For example, the UBN-based HIPC resource allocation has a positive impact in terms of equity because within a framework of strong budget restrictions, it ensured resources for public investment in poor municipalities.

In social capital expenditure, the resources destined to rural development favor the productive sector of the poorest municipalities through the construction of physical infrastructure. It is important to further enhance this policy of destining resources to rural development in the poorest municipalities as these resources will enhance the competitiveness and productivity of their productive activities and will contribute to a gradual decrease of the considerable disparities regarding the provision of physical infrastructure that still prevail in the municipalities, especially in the rural area.

Nonetheless, as in the case of current social expenditure, besides equity considerations, it is necessary to evaluate the efficiency of public social capital expenditure and to analyze up to what extent the public investment projects executed in the municipalities truly reach the population and effectively contribute to poverty reduction.

In terms of information for the follow-up of social expenditure, disaggregation in the fields of education and health proposed in the study is highly recommended. In education, we recommend disaggregating the information per level of instruction (initial, primary, secondary, alternative and higher); and in health per level of attendance (first, second and third level).

In capital expenditure, we recommend maintaining the disaggregation per sector mentioned in this document, which mainly means separating the PLANE from the Rural Development sector, as the objectives of this program are to create temporary employment, not rural development.

Likewise, we recommend maintaining the changes suggested here as regards the sectoral distribution of HIPC II resources, as this will enable enhanced precision in the destination of those resources.

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ANNEX N° 1

APPLIED METHODOLOGY

SOCIAL EXPENDITURE IN BOLIVIA

General Aspects Related to the Information for Measurement of Social Expenditure in Bolivia

The Fiscal Programming Unit of the Ministry of Finance, in charge of follow-up of public funding mainly in the context of agreements with the IMF, is responsible for measuring social expenditure.

The emphasis on social policies in Bolivia, including the country's participation in the initiative for Highly Indebted Poor Countries (HIPC) in which Bolivia was one of the first participating nations, resulted in the need to have information to assess the efforts, in terms of public resource allocation, the country was making to reduce poverty. Hence, the decision was made to quantify public expenditure destined to social goals.

Two aspects were considered in quantification of the so-called "social" expenditure: the first was to answer the question what aspects are considered under Social Expenditure, the second one was related to the funding sources to be used for collecting the primary information, which should be consistent with the information prepared by the UPF.

The aspects to be included as social expenditure were defined as a result of an interinstitutional discussion and effort (UDAPE – UPF - VIPFE). The decision was that social expenditure should include all (current and capital) expenses associated with (i) health, (ii) education, (iii) basic sanitation, (iv) urbanism and housing, (v) rural development, and (vi) pensions.

Subsequently, the decision was made to prepare information in a parallel way on basic social expenditure or pro-poor expenditure, excluding expenses in pensions and universities from social expenditure as these were considered expenses that do not contribute to a direct reduction of poverty.

The UPF used its own sources of information created to follow up public finance to gather information for the quantification of social expenditure, as well as information from the General Accountancy Direction (DGC) that depends on the Vice-Ministry of the Budget in the Ministry of Finance and the Vice-Ministry of Public Investment and External Funding (VIPFE) in the Ministry of Finance.

Based on valuation criteria, there are differences between the numbers collected by the UPF and the primary sources of information, particularly as regards the expenditure in education. Therefore, the recommendation is for the UPF, DGC and UDAPE to promote technical meetings, with the purpose of building a common and consistent database.

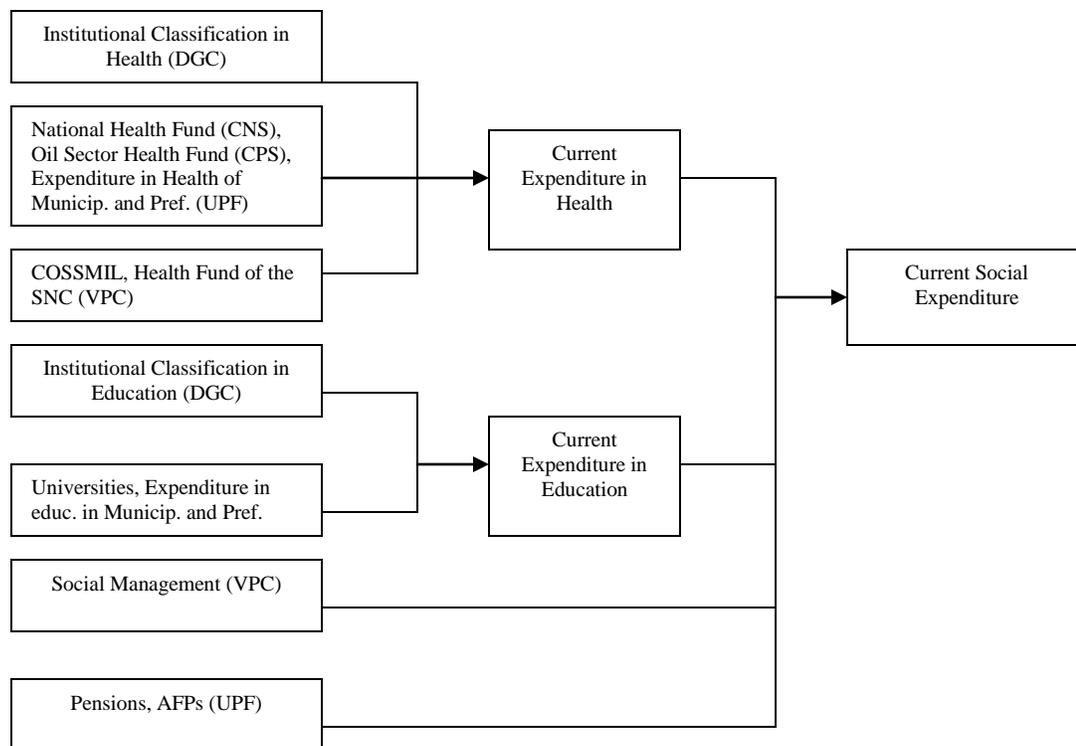
Likewise, and aimed at precisely determining the level of equity of social expenditure and ensuring continuity of this study, we recommend disaggregating the information on the sector education according to the levels of instruction (initial, primary, secondary, teacher training

and technical education, alternative and higher-university education); and in health, we recommend identifying the expenditure in the first, second and third levels of attendance.

Current Social Expenditure

In the current social expenditure estimated by the UPF, the expenditure of the State in health, education and pensions is registered. The expenditure in health contains the expenditure in health care funds, and the expenses incurred by municipalities and prefectures. The expenditure in education includes the institutional expenditure, as well as the expenses of universities, municipalities and prefectures. The expenditure in pensions considers information on the pensions the State pays.

The UPF has information on the 9 prefectures and on 111 municipalities³⁴. In terms of municipalities, the 111 account for 65% to 70% of the total current municipal expenditure.



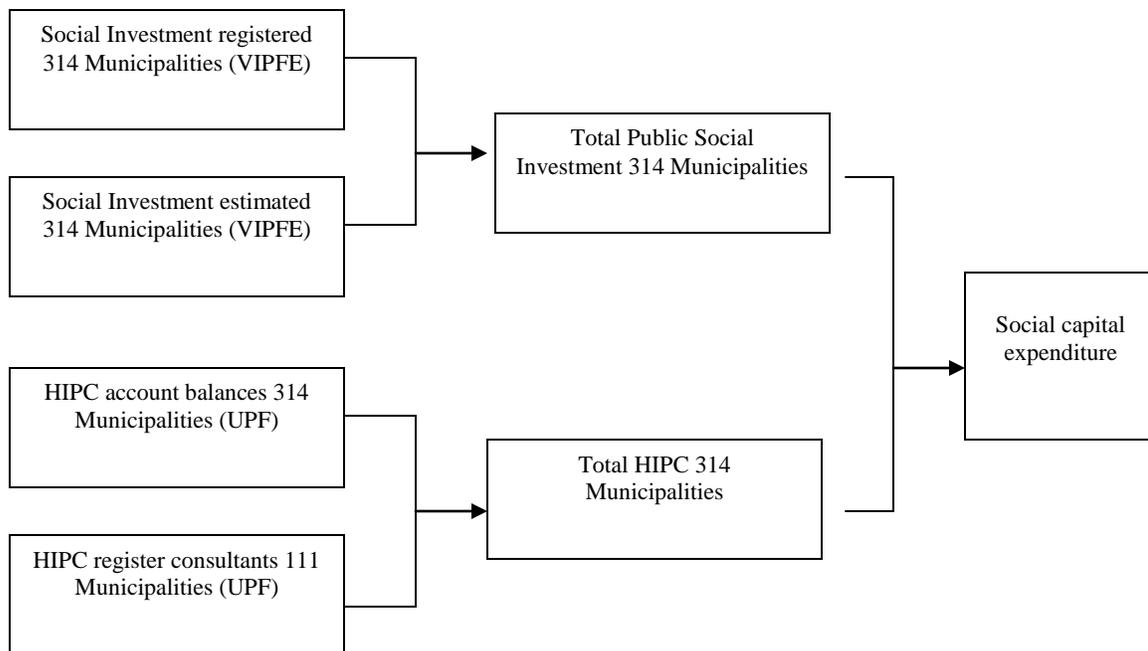
The collection of information on current social expenditure by the UPF is basically based on an institutional and non-functional classification, i.e., the expenditure in a specific sector is related to the expenditure of the principal institution of that sector. Technically, this way it is possible to have an estimate of the expenditure destined to the sector, although it is necessary to note that the expenditure of the principal institution in the sector does not always correspond to the expenses executed in that sector.

³⁴ The information of prefectures takes into account the resources of the HIPC solidarity fund. In the municipalities, the current expenditure the 111 municipalities incur with their own resources is considered.

For example in health, the expenditure in national heroes is included, which on the basis of a functional classification would not be included as part of the social expenditure in health; on the other hand, the Ministry of Defense incurs in expenses in health and education that are not included in the expenditure in health, but that would be included were a functional classification used. In the future, we highly recommend developing a functional classification to give a precise overview of social expenditure.

Capital Social Expenditure

As regards capital expenditure, the information comes from the public investment projects registered by the VIPFE. As regards the HIPC resources destined to investment, the information is provided by the UPF.



The information on public investment gathered by the VIPFE is composed of the investment registered and identified in specific projects and an estimate based on the tax co-participation resources. The information on the use of HIPC resources destined to investment is collected by the UPF through the registration of bank balances for the 314 municipalities.

However, there is also detailed information on the HIPC resource allocation for 111 of the 314 municipalities. Based on these two sources of information almost all resources the municipalities use for capital expenses are covered, as this would only leave out the capital expenses made with own resources. But this category is not very important as most own resources are used to cover current expenses. The own resources used in capital are mostly destined to counterpart resources in projects, which are registered in the VIPFE.

On the basis of this information, and also as a result of the study, the destination of HIPC resources was determined, making a detailed identification of the use in the different

components of social expenditure, especially those related to Rural Development, isolating those municipalities that are clearly urban and therefore, it is considered that the HIPC resources in these municipalities are not entirely destined to rural development, but rather to other components of social expenditure.

In turn, various projects (activities) were detected that were not in any of the components of the social expenditure structure, and for which a new category was opened under the heading “multisectoral”, including activities related to gender, electrification projects in the capital cities as well as other topics.³⁵

On the other hand, this study considers the PLANE as a new category of social capital expenditure, which is why this program is not included in the “Rural Development” category of Social Expenditure. This is because of the characteristics of the PLANE, an emergency and temporary program created for the generation of employment that, even though it fulfills an important social function, is not aimed at rural development.

Even though the works implemented with PLANE support have an important salary component (which is why this program could be included under current social expenditure), definitely, these salaries are used to create or maintain infrastructure works. Because of this, the PLANE was maintained as a component of capital expenditure.

General Aspects Related to the Methodology to Measure Equity in Current Public Social Expenditure

The current social expenditure quantified by the UPF includes the expenditure in education, health and pensions. The estimate of equity in the current public expenditure is based on information from the MECOVI surveys 1999 and 2002, the Ministry of Education and the UPF.

Although the MECOVI survey registers the expenditure of the households (private) in health and education, the information it contains distinguishes whether the health or education service the household used is public or private. Based on this information, it is possible to isolate the individuals who receive public education or public health care. In the case of the expenditure in pensions, the MECOVI survey identified whether the household does or does not have a pensioner, which is useful to identify and separate pensioners.

In general, inequality and poverty structures³⁶ were obtained in the groups that use public health care and education, as well as in the persons receiving a pension. These structures were used to distribute public expenditure in education, health and pensions between the poor and non-poor and among income deciles. This way, it was possible to evaluate the

³⁵ The statistical information on the composition of expenditure of HIPC resources is still rather aggregated in this study. Insofar as more information is available on the municipalities (e.g. through the SIGMA), we recommend a detailed follow-up on use of the HIPC resources, aimed at further detailing the composition of use of the HIPC resources.

³⁶ The poverty estimate according to the poverty line is based on a comparison of the per capita household income with the poverty line; in this sense, when a member of the household is poor, all members of the households will be poor and when a student lives in a poor household then (s)he is considered poor.

progressivity or regressivity of current public social expenditure, i.e. whether the poor are the ones benefiting to a lesser or higher extent from public expenditure.

Methodology to Measure Equity in Current Expenditure in Education

The starting point for the analysis of equity in the current expenditure in education is the identification of the expenditure in different levels of instruction, i.e. initial, primary, secondary and higher-university education.³⁷ On this basis and considering the information on the expenditure in every level and on enrollment provided by the Ministry of Education and the poverty and distribution structures from MECOVI surveys, these sources of information were combined to estimate the level of progressivity or regressivity of the expenditure in education.

Based on the MECOVI survey, it was possible to identify the students enrolled in public schools according to the level of instruction, which was used to determine the groups to be analyzed. These groups are then used to differentiate the poverty condition (in terms of the poverty line) and income deciles, aimed at obtaining structures that are used to deduct whether the expenditure in education reaches the poorest population segments. For example, in the case of education, through the MECOVI survey it was possible to identify that 76.3% of the enrolled students come from poor households and 33.7% from non-poor households. This same proportion was applied to public expenditure in primary education, i.e. the assumption is that 76.3% of the expenditure at this level favored students living in poor households.

The structure of the survey was applied to both the expenditure in education and the number of enrolled students informed by the Ministry of Education, so as to obtain the proportion of the expenditure destined to the poor and non-poor, as well as per income decile.³⁸ This way the idea is to obtain an estimate on the progressivity or regressivity of the expenditure in education according to the poverty condition and income deciles.

The information used for this analysis comes from the Ministry of Education as the information the UPF has is not disaggregated and therefore, does not allow for an analysis per level of instruction, i.e. initial, primary, secondary, alternative and technical education.

Methodology to Measure Equity in Current Expenditure in Health

The information from the UPF regarding the current expenditure in health corresponds to the institutional classification of the DGC of the Ministry of Finance. This information is not disaggregated according to the levels of state attendance, which would allow for a more precise analysis of equity in the expenditure in health.

The public expenditure in health used in the estimate is that of the UPF, but eliminating the expenditure in national heroes as this does not correspond to expenditure in health per se.

³⁷ As it is not possible on the basis of the information of the household survey to make a disaggregation for the levels of special and technical education, these two levels were omitted in the analysis.

³⁸ The assumption used in the estimate is that the average cost per level is the same for all students enrolled in the same level.

In order to make an estimate of the level of equity of the expenditure in health, first the number of attendances in public sector facilities³⁹ in one year was obtained.⁴⁰

Based on the MECOVI survey, the income decile and poverty structure were obtained for the provided attendances, i.e. the amount of poor and non-poor who were attended, as well as the number of people attended in public facilities according to income deciles.

According to the structure resulting from the survey and with the information on the expenditure in health of the UPF, the expenditure of the state destined to the poor and non-poor was inferred, as well as per income decile, under the assumption that the expenditure is the same for all attendances; hence, it is possible to establish parameters on the regressivity or progressivity of the expenditure in health.⁴¹

There is no disaggregated information on the expenditure in different levels of attendance in the health care sector that are comparable to those in the MECOVI survey or specific health care surveys such as the ENDSA. In this sense, we opted for an estimate in aggregated terms. Therefore and as was mentioned before, if disaggregated data were available on the different levels⁴², it would be possible to obtain a better estimate on the regressivity or progressivity of the expenditure, as this study assumes that the cost per attendance is the same.

Additionally, the analyses made in this study on equity of the expenditure in health could be enriched with the results of the new ENDSA survey, which will be available in the next months and which would allow for an analysis of the level of equity at the level of specific programs.

Methodology to Measure Equity of Expenditure in Pensions

Based on the MECOVI survey, the objective of which is to measure the standard of living of the population, it is possible to estimate the number of pensioners at the national level, including the people who receive a pension for retirement, widowhood, invalidity or orphanhood. The information from the MECOVI survey starts from a sample, not a formal register. In this sense, it was used only to obtain an estimate of the socio-economic characteristics of the pensioners and then infer the regressivity or progressivity of the expenditure in pensions in Bolivia. When comparing the structure of the expenditure in pensions derived from the MECOVI survey, with the information from the National Service of the Pay-As-You-Go System, it can be seen that both structures are rather similar; hence,

³⁹ Public attendances were considered to be the services provided in public hospitals, health care centers, health posts and the National Health Care Fund (CNS) / Other funds.

⁴⁰ The information per number of attended persons was also obtained from the MECOVI surveys 1999 and 2001. The information from the surveys is based on a monthly periodicity; the information was annualized for the estimates.

⁴¹ Even though in the case of the funds, such as the National Health Care Fund (CNS) and the oil fund, resources mostly come from contributions, they do form part of the non-financial public sector.

⁴² The levels of attendance are: the first level (immediate medical care), the second level (intermediate medical care) and the third level (complex medical interventions). The assumption is that the cost increases when the level increases due to the increasing complexity of the interventions from one level to the next. Probably, households in the upper deciles are the ones using the public health care facilities the most.

the expenditure in pensions registered by the UPF was distributed using the poverty structure of the MECOVI survey at an aggregated level.

This analysis used income quintiles, as the number of observations in the household survey is low and does not allow for a more detailed disaggregation.

Furthermore, based on the estimate of the pension-receiving population according to the pension category and the total expenditure in pensions, it is possible to reach conclusions as regards the groups of pensioners⁴³ receiving a pension. In order to achieve this objective, we opted for taking the poverty structure and income quintiles of the pensioners based on the MECOVI survey and to apply this same structure to the public expenditure in pensions.

Besides, an indicator was prepared on dependency on the pension of the household with a pensioner. This indicator is the quotient between the pension income of the household and the total income of the household.⁴⁴

Methodology to Measure Pro-poor Incidence of Social Capital Expenditure in Municipalities

Social capital expenditure in Bolivia is composed of the public investment projects financed with own resources, external funding (grants and credits) and HIPC resources, which were destined to education, health, rural development, urbanism and housing, basic sanitation and multisectoral topics.

There is information on the public investment in projects at the municipal level, besides an estimate of the VIPFE on municipal investment with tax co-participation resources. In this study, this estimate was municipalized on the sectoral structure of the investment made in municipalities, with the purpose of having an approximation of the total investment in every municipality and in every sector.

With the objective of estimating whether the social public investment is pro-poor or not, the structural poverty information measured by the UBN index coming from the Census 2001 was combined with the information on capital expenditure registered by the VIPFE and UPF. The municipalities were organized in terms of the UBN and capital expenditure.

With regard to the HIPC resources, some changes were made in the way in which the UPF distributes the information. The principal structure of these resources covers projects in health, education and infrastructure. The UPF redistributes these projects according to the social capital expenditure groups that were defined, and which are: Education, Health, Basic Sanitation, Urbanism and Housing, and Rural Development. On this basis, a revision was made of the components of these groups, followed by a recomposition of capital expenditure in those groups.

⁴³ The groups of pensioners that can be identified in the survey and that were used for the analysis are: pensioners, widows, invalids and orphans.

⁴⁴ In order to calculate the regressivity or progressivity of the expenditure in pensions, the contributions to AFPs registered in the UPF data were omitted, as they are not considered within the retirement pay pensioners receive.

HIPC Expenditure Matrix
Composition of expenditure components in Municipalities
Infrastructure

Components of Capital Expenditure	Education	Health	Basic Sanitation	Urbanism and Housing	Rural Developmen t	Multisectoral
Territorial organization						X
Support for Micro Enterprises						X
Animal Sanity					X	
Community Roads					X	
Agricultural Micro Irrigation					X	
Electrification					X*	
Infrastructure for Tourism					X*	
Other Prod. Infrastructure						X
Alternative Education	X					
School Breakfast		X				
Epidemiology		X				
Citizen Safety						X
Water – Sewer Systems			X			
Health		X				
Education	X					
Other Social Infrastructure				X		
Environment						X
Natural Disasters					X*	
Ethnias						X
Gender						X

* In the municipalities with more than 10,000 inhabitants, the corresponding amount is taken as multisectoral.

Source: Own elaboration based on information from the UPF

This way, this study made some adjustments in the methodology the UPF uses, with the purpose of further detailing the information on the use of HIPC resources. These adjustments were made in the component “Productive and Social Infrastructure” of HIPC resources, which was redistributed in the components of social expenditure of the UPF, besides creation of a new component called “multisectoral”.

The multisectoral category registers the expenditure in territorial organization, support for micro enterprises, productive infrastructure, citizen safety, environment, ethnias, gender and the expenditure in electrification, infrastructure for tourism and natural disasters in the municipalities with more than 10,000 inhabitants.

On the other hand, the UPF follows up the expenditure with HIPC resources in 111 municipalities. In these 111 municipalities, disaggregated information is available on infrastructure, education and health; the resources allocated to these municipalities correspond to more than 60% of all HIPC resources. In the other 203 municipalities, HIPC resources are controlled by means of the bank accounts that correspond to the different HIPC components.⁴⁵

⁴⁵ The information on bank account balances for the 111 municipalities controlled by the UPF is the same when looking at totals; nonetheless, it differs with the information the consultants collect as regards the internal structure of the total amount. In other words, there are differences between the registered information obtained from the bank accounts and that collected by the consultants in education, health and infrastructure. These differences are the result of the municipalities using resources from one account (e.g. health) in another component (e.g. education).

Considering that the characterization of HIPC resources proposed in the matrix above requires disaggregated information for all municipalities, in the municipalities that do not have disaggregated information for HIPC resources, as they are not covered by the UPF, the following procedure was applied: in the first instance, municipal UBN deciles were generated based on the Census 2001, with the purpose of grouping the municipalities with similar poverty characteristics.

In every decile, the structures of the HIPC components were generated for those municipalities that receive UPF control, and an average structure was calculated for every decile based on the municipalities with UPF follow-up, i.e. the 111 municipalities. This average structure was applied to the municipalities that correspond to every decile and that do not have disaggregated information. Then, the balances of every municipality, and which are reported by the UPF, were distributed on this average structure. This way, an estimate was obtained of the HIPC resources for the remaining 203 municipalities.

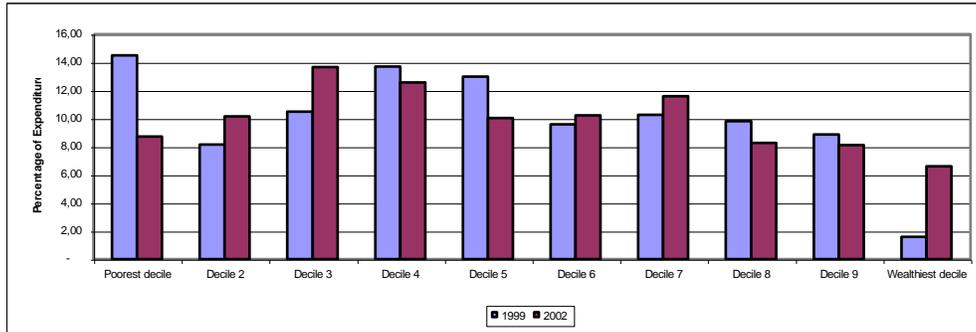
The information obtained from the municipalities was combined with structural poverty indicators (UBN) of the municipalities, with the objective of analyzing the progressivity or regressivity of investments at the municipal level.

For the year 2003, the information available on HIPC resources is an estimate based on expenditure until November. In the case of public investment, only preliminary information was available.

ANNEX N° 2

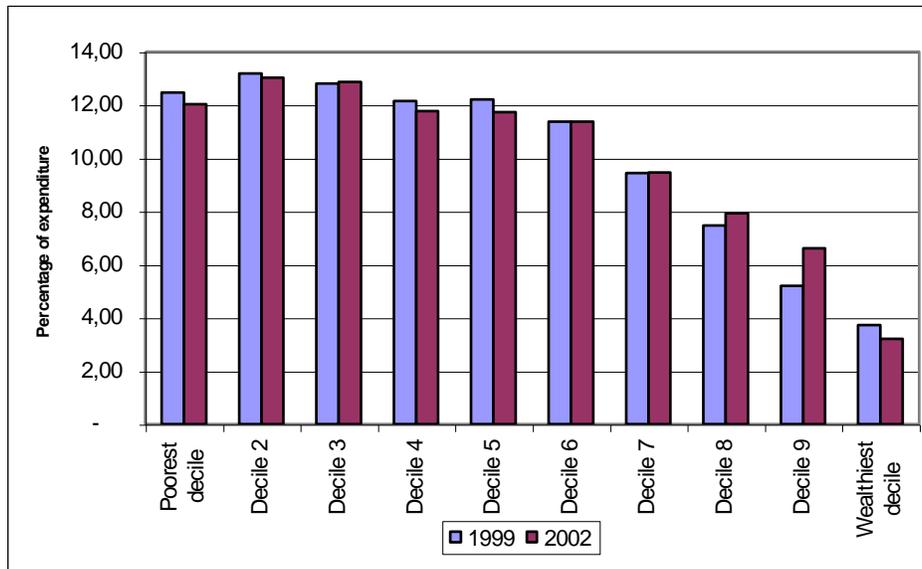
CURRENT SOCIAL EXPENDITURE IN EDUCATION, POVERTY AND INEQUALITY

**Expenditure in Initial Education, according to the Income Decile Structure
(In percentage)**



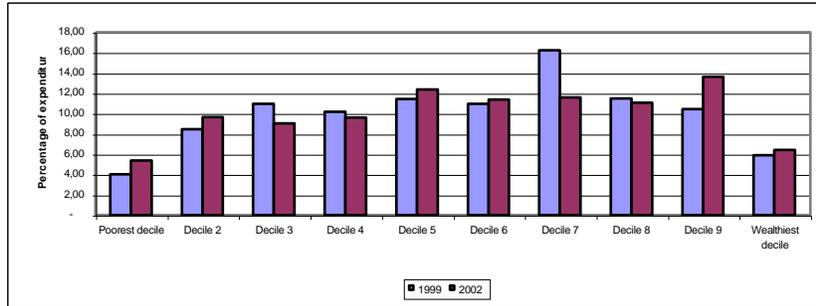
Source: Own elaboration based on information from the Ministry of Education

**Expenditure in Primary Education, according to the Income Decile Structure
(In percentage)**



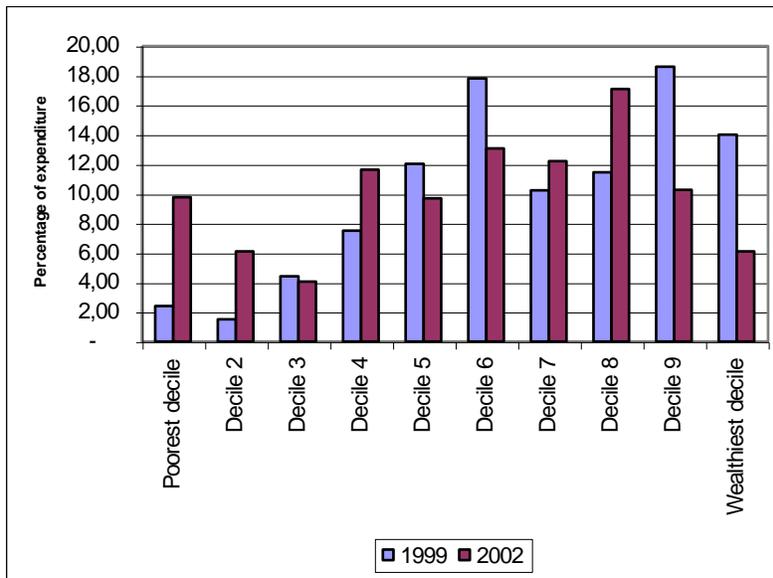
Source: Own elaboration based on information from the Ministry of Education

**Expenditure in Secondary Education, according to the Expenditure Decile Structure
(In percentage)**



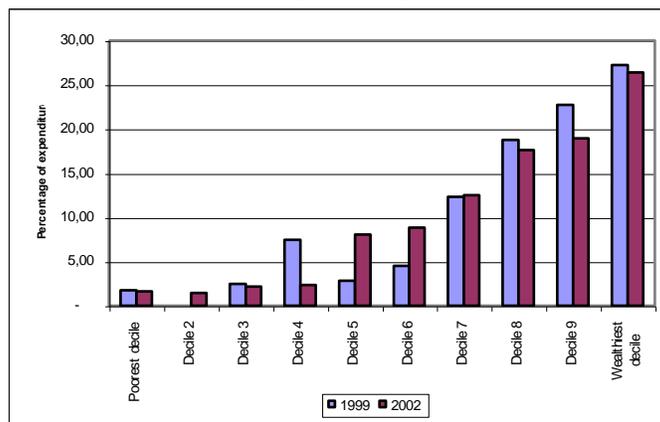
Source: Own elaboration based on information from the Ministry of Education

**Expenditure in Alternative Education, according to the Income Decile Structure
(In percentage)**



Source: Own elaboration based on information from the Ministry of Education

**Expenditure in Higher Education, according to the Expenditure Decile Structure
(In percentage)**



Source: Own elaboration based on information from the Ministry of Education and UPF

**Current Expenditure of Public Education, 1999-2002
(In current bolivianos)**

ITEM	1999	2002*	1999 Modified	2002 Modified
CENTRAL ADMINISTRATION	21,655,418	61,365,749		
DEPARTMENTAL AND DISTRICT DIRECTIONS	103,063,138	134,493,624		
INITIAL EDUCATION	71,690,731	88,842,236	77,320,804	96,830,677
PRIMARY EDUCATION	1,121,981,264	1,560,824,525	1,210,093,584	1,701,169,412
SECONDARY EDUCATION	245,430,956	359,835,870	264,705,334	392,191,284
HIGHER NON-UNIVERSITY EDUCATION	62,981,418	56,695,590	67,927,525	61,793,496
ALTERNATIVE EDUCATION	66,794,498	79,242,543	72,040,056	86,367,807
SPECIAL EDUCATION	0	9,045,793	0	9,859,165
TECHNICAL EDUCATION	19,229,156	23,733,959	20,739,275	25,868,049
Universities			748,667,000	1,050,271,000

Source: Own elaboration based on information from the Ministry of Education and UPF

Note: The modified expenditure considers resources of every level plus resources executed in the central administration and departmental directions distributed according to expense structures.